AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

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[For the American Bee Journal.]

Weight of Honey Bees.

TRANSLATED FOR THE AMERICAN BEE JOURNAL FROM THE "BIENENZEITUNG."

According to the investigations of the Baron of Berlepsch, 5,600 outlying worker bees weigh a pound. These are for the larger part honey gatherers resting from their labors, and with their honey sacs nearly empty.

According to my own weighings, one pound of bees brushed from the combs in the evening contains 4,300 bees, consisting in part: 1st. of honey gatherers; and 2d, of young bees engaged in nursing the brood, whose stomachs contain the partially digested constituents of the food (pollen and honey) administered to the larvæ.

Again, a pound of bees driven out of a hive early in the morning in the working season, contains 4,050 bees, and comprises both honey gatherers and young bees, the honey gatherers constituting much the larger portion. These have gorged themselves with as much honey as they could appropriate in the hurry of departure.

Further, a pound of swarming bees, regardless whether prime or second swarm, contains 3,600 bees. These, as is well known, consist altogether of older workers and young bees sufficiently mature to fly, with an intermixture of drones, taking with them a sufficient supply of food or honey, to serve them three or four days, though it is fair to assume that, in the hurry and confusion incident to emigration, some of them come away with stomachs empty, or nearly so.

And, finally, at the close of the breeding season (or about October 10th), a pound of bees killed with sulphur fumes, contains only 3,000, having, in preparation for wintering, more or less honey stowed away in their stomachs, and some fæces in their intestines.

The average of these figures is 4,110 bees to the pound. As regards swarming bees, I remember to have read, many years ago, in some small treatise on bees, as follows: "There are not, as is commonly stated, 175 swarming bees to the half ounce, but only 123." On trial, I found there were not more than 120 such bees in half an ounce. The Baron of Berlepsch is correct, when regretting that he neglected to test the weight of swarming bees, he expressed the conviction that of them 4,000, at most, would weigh a pound. The numbers I have given above were ascertained with the utmost care and precision, and I now present them in tabular form:

Description.	1 lb.	2 lbs.	3 lbs.	4 lbs.	5 lbs.	6 lbs.
1. Outlying Bees,	5,600	11,200	16,808	22,400	28,000	33,600
2. Bees Brushed Off	4,300	8,600	12,900	17,200	21,500	25,800
3. Bees Driv'n Out	4,050	8,100	12,150	16,200	20,250	24,300
4. Swarming Bees,	3,600	7,200	10,800	14,400	18,000	21,600
5. Bees in Autumn	3,000	6,000	9,000	12,000	15,000	

A swarm weighing seven pounds will contain 24,200 bees; and one weighing eight pounds, 28,800.

Now, if 13¾ ounces of expelled bees contain as many individuals as 15 ounces of swarming bees, then a driven swarm weighing five pounds will have appropriated and carried off 6¼ ounces less honey than a natural swarm of the same weight.

Again, if 15 ounces of swarming bees contain as many individuals as 18 ounces of bees in autumnal repose, then a swarm weighing four pounds have twelve ounces less honey in their stomachs than the same weight of bees in repose, &c. The number of bees in swarms weighing seven and eight pounds is purposely stated, as I have myself had swarms weighing seven and eight pounds severally. Such gigantic swarms always produce astonishing results in favorable seasons.

The numbers and weights given in the above table are designed to furnish the readers with a guide or norm, according to which they may institute comparative experiments—the results of which should be communicated for publication.

Let me add a few queries:

How much more honey will a heavy swarm secure than a lighter one, weighing a specified amount less? How strong must an artificial swarm, consisting of No. 1, No. 2, or No. 3 class bees be, that it shall be able to secure the requisite winter supply of stores, without extraneous assistance? Is there any perceptible difference—and if so, how much between the product of a natural and an artificial swarm having an equal number of bees, whose internal and external relations are precisely similar? and if the latter should come short of the former in productiveness, what should be the weight of an artificial swarm, in a subsequent experiment, to enable it to keep pace with the other?

E. POHLMANN.

Sayn, near Coblenz, April 20, 1871.

An Ill-treated Queen.

TRANSLATED FOR THE AMERICAN BEE JOURNAL.

I divided a colony, making an artificial swarm, and using the old queen for that purpose. Eight days afterwards I examined the parent stock, to see how many queen cells had been built. I found twelve, of which I removed ten, leaving two, that a queen might certainly be reared. Eight days later, in the evening, I heard a young queen teeting in this hive, and on opening it, found a fine large yellow queen on one of the combs; when, almost at the same instant, another young queen, handsomer still than the first, issued from the second cell, on another comb, and was evidently preparing to fly. I caught her,—beauty of color and shape inducing me to preserve her. I formed a small nucleus, using three combs with sealed brood and the adhering bees, starting thus what should soon be a pretty strong colony. I kept it in my cellar four days, and then set it on its destined stand. The bees immediately began to fly, and I soon saw the queen issue and take wing. In about five minutes she returned, evidently not fertilized, and entered the hive. In a few moments the bees became agitated. I opened the hive, and was astonished to see a dense cluster of bees, about as large as my fist, lying on the bottom. Surmising that the queen was imprisoned therein, I blew smoke on it freely, but without effect. I then separated the cluster by means of two small sticks (and some force was required to do so). I found the queen among them, but still uninjured, and having caged her, placed the cage among the bees, which instantly covered it, enraged and furious. I so left matters till next morning, when harmony and peace being restored, I released the queen, and she passed among the bees without renewed annoyance. On the first and second days after this, I saw no change, but on the third day the bees showed as much agitation as on the former occasion. On opening the hive, I found another cluster on the bottom, from which I again released the queen, finding her this time very weak and with one wing and a hind leg injured. She appeared as though fertilized, and I inferred that she had been attacked on her return from her bridal trip. I put her in a cage, and left her among the bees till morning, when, finding all peaceable, I liberated her, and she was kindly received. On the fourth day I was not a little surprised to find her laying. Some of the cells contained eggs, and others larvæ, though none of the latter were yet sealed. The young bees, when mature, were very pretty. I wintered her as a reserve queen, and gave her to a queenless colony next spring, but found her dead in front of her hive in May following. Her successor, reared from her brood, was a handsome queen.

Possibly the bees of this nucleus, having been taken from another hive, may not have missed the young queen while she was absent, and on her return mistook her for a stranger and an intruder.

VOGEL.

Introducing Queen Bees.

We translate from the German the following instructions for solving this prime puzzle in bee-culture—giving both the process and the reasons for each operation. The writer says that, in hundreds of cases, he has never known it to fail, when the directions were strictly adhered to. If it is *sure*, it need not be an objection that it is *slow*; as it involves less waste of time than the loss of a valuable queen.—[ED.

If your bees are in a common box or straw hive, drive them out in the usual manner into an empty box or hive, then shake them out on a sheet, seek for and remove the queen, and return the bees to the empty hive or box. Let them remain in it undisturbed, till by their restlessness they show that they have become aware of their queenless condition. Then fumigate them with tobacco, sprinkle them with sugar water, and introduce your new queen among them, gently and uncaged, having previously besmeared her with honey taken from the hive from which they were driven. She will be readily and gladly accepted. Let the bees and queen remain together thus confined in the unfurnished hive twenty-four hours. Then shake them out on a sheet and run them into a movable comb hive, into which the combs have been transferred from their original hive; set them on their stand, and matters will proceed peaceably and prosperously.

If your bees are in a movable comb hive, then after catching and removing the queen, take out the combs in rotation and shake the bees down on a sheet, carefully brushing all of them from the combs, and set these in an empty hive. Now run the bees into an empty hive or box, and let them remain in it till they show signs of queenlessness. Then fumigate them with tobacco, sprinkle them with sugar water, and introduce among them your new queen, uncaged, but besmeared with honey, as directed in the former case. Let them remain thus confined twenty-four hours, and then run them into a hive in which their original frames and combs have been inserted. They will be content to feed themselves after their forced and prolonged abstinence, and so rejoiced in the possession of a fertile queen as to refrain from doing her bodily injury.

In this process the following are the points essential to success:

1. The bees to which a queen is to be introduced, must be altogether removed from their old hive into an empty one or a box, that nothing—not even the odor of their late dwelling—may remind them of their former queen.

2. The hive or box into which they are transferred, must contain neither brood nor combs, so that the bees may be completely non-plussed, and made more thoroughly aware than otherwise of their destitute and helpless condition. They will thus be completely dispirited, little disposed to make hostile demonstrations, and ready to receive and cherish a fertile queen when properly presented.

3. The introduction of a new queen should not be unduly delayed, but made as soon as the

bees strongly manifest grief or distress for the loss they have sustained—that is, about one hour after the old queen was taken away.

4. The bees must be well fumigated with tobacco and sprinkled with sugar water; and the queen besmeared with honey taken from the old hive, if such is to be had.

5. The queen must not be rudely thrust among the bees; for all hasty or violent movements cause momentary irritation, placing her in jeopardy. She must be gently presented, unconfined, and allowed to mingle with the masses without a struggle.

6. The operation should be undertaken in the evening, a little before dusk, as bees are more peaceably disposed then than earlier in the day.

7. The bees, with the introduced and now accepted queen, must remain together, confined in the unfurnished hive, till the evening of the following day. Then hunger, and the desire for better accommodations, will have effectually subdued the rebellious temper of every individual, and rendered the new home and the new queen quite desirable objects to them.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—We are very thankful to be able to write to you again. After six weeks of outdoor life, and an almost exclusive diet of beesteak, we feel so much improved, that we began to conclude our "mission" is not finished by considerable.

Mr. "B. Lunderer," thinks we are not a talkative person. (By the way, we really wish we deserved the high compliments he paid us,) and we wish to say to him and many others, that Novice certainly has the will, though not the *power*, to talk and to answer all the letters written to him. Our present ill health is very much owing to the mental strain necessary to treat every one civilly and give inquirers the attention they should have; until a day in the woods, where we were secure from seeing any one, was a positive luxury.

In regard to our basswood forest, in one of our rambles we discovered a forest of fifteen acres, which the owner had sufficient good sense to fence up from all stock of every kind, for six or seven years, so that young timber of every description had grown up unmolested. We were overjoyed to find there thousands of young basswoods, from one inch to fifteen feet high; and we are going to commence transplanting right away, removing a shovelful or more of the wild wood mould with each tree.

The piece of woodland mentioned looks like a mine of wealth to us, and we hope it may prove such to its enterprising owner.

Mr. "B. L." before mentioned, hopes we may have reverses, &c., enough to keep us from becoming egotistical. Bless your heart, "B. L." and a host of others, we only think we shall have to tell the whole truth, however humiliating.

We wrote you two months ago, Mr. Editor, that we had sold about two tons of honey, and besides had nearly all the upper stories of our hives filled with combs of sealed honey, for making all short stocks good for the winter. Well, we know our index scales had shown a regular decrease in weight, weekly and almost daily, since the middle of July; but still we somehow hoped that other stocks had done better, until about the first of October, when we found that the index stock had about consumed the thirty pounds left in the hive when we stopped extracting—the drouth this fall, and other adverse causes, having totally spoiled our usual fall pasturge.

Of course prompt meaures *should have been taken at once*, to see that none were in danger of starving. but we put it off until about a week ago. (We should like to charge what follows to "ill health," or some*thing*, or some*body* else; but the plain truth is we were careless and put it off—something that will never do in bee-keeping), when we found that No. 1, was starved dead—with the very best queen too, in all our apiary. She might have been saved, but was *neglected* and FORGOTTEN until dead. This roused us up. We went to work and hitched our index scales to every hive, and found we should have to feed over a thousand pounds to put all in good order.

We *thought* we fed promptly all that were in danger, but when we came to No. 12, we found it "silent in death." Thus was another of our best stocks gone, and the one that was emptied last of all in July. We tried reviving as before, but it was too late. The queen (a fine one, and probably next to No. 1) was still alive, and a dozen or two of bees that gathered or stole enough to keep alive. These we put in a cage over another hive "*ad interim.*" Next day she had got out of the cage, and was killed of course. "Clearly an accident!" many would console themselves with saying. *But there was no accident about it! A beekeeper has no business to cage queens so carelessly that they can crawl out*, nor to perform any operation with bees in such a miserable "slip shod" way. We feel sick whenever we think of it.

Some stocks had no honey; so we must give them twenty-five pounds, and say ten additional to enable them to secrete wax to seal it, raise brood, &c. With the old Novice feeder or any feeder we ever saw, it would take a month's time and no end of vexation and stickiness, to get it done. The idea was intolerable, with sixty-three hives to supply. Of course our thirty-two story Langstroths were better off, but they all needed feeding some—that is, after we equalized the sealed honey.

We had one barrel of honey left, for which we then had received an offer at twenty cents per pound, coffee sugar syrup can be made for a little more than ten cents.

Now right here we protest that if anybody else concludes to do as we did, and fails, do not blame us nor say we recommended it. From many previous experiments, we concluded to sell the honey and feed coffee sugars, twenty pounds to a gallon of water and four teaspoonfuls of cream tartar, to prevent crystallization.

Our index scales had shown that a colony of

bees can gather ten to fifteen pounds of honey in a day; and if so, what should hinder them taking twenty or twenty-five pounds in a day and night, from a suitable feeder? And we did make a stock take twenty pounds in nine hours, without more than five minutes' work of our time. It was done in this way. We got a tea-kettle; removed spout and handle; soldered perforated tin over where the cover goes; put on a screw top, like those on oil cans, near the perforated tin, to fill it by. Now set it on the scales and fill with as many pounds of syrup as you wish. Fix the screw cap and ears that held the handle, so as to form three legs. When this is inverted over the frames, your work is done. Invert it first over a pan, until it ceases to run a stream, and you will have no leaking.

Hoping this may save others as much time as it has saved us, we are yours and all beekeepers,

NOVICE.

P. S. All letters giving us facts, are thankfully received. Please make all inquiries through the Journal.

[For the American Bee Journal.]

About Queen-Raising.

I have raised and shipped, by mail and express, eight hundred and twenty-five (825) queen bees during the season just past. Of this number, less than twenty-five (not 25 per cent.) died or proved worthless when they reached their destination. One of the latter was found to be a drone-laying queen, and one a queen that laid eggs which would not hatch. This one was returned to me safely from Ohio, by mail. She was handsome, and had the appearance of a good laying queen. A very few have been reported as hybrids—less than ten. I think that twenty-five queens would cover the loss by mail, including those that proved to be impure. Purchasers acknowledging the receipt of queens, would invariably write that they were in good condition (many of them adding: "they were as lively as crickets when received").

A few of my customers lost some of their queens in introducing, but most of them were well satisfied with the queens sent to them. Somewhat over two hundred of the queens sent from my apiary went into the State of Illinois,—a fact speaking well for my stock in that State. For several seasons I have supplied the best and most prominent beekeepers in the country with queens, and through their influence have received more orders than I have been able to supply. I have received orders for more than fifteen hundred (1500) queens since January, 1871; and when I started last spring, I had on my book orders for more than four hundred queens. In August I had in operation two hundred and eighty nucleus hives, besides the full stocks on which I was raising queens; but to supply the demand for queens is more than I could do.

Beekeepers who visit my apiary express the opinion that I must lose a good many queens when they fly out to meet the drones; but such is not the case. I have been very fortunate in that respect, and have lost comparatively few. I set my hives very irregularly, and ninety-five out of every hundred queens that fly out, find their own home when they return. The number not returning is very small.

I find it much easier to raise queens than to raise drones after the honey harvest is over; and it was only this season that I discovered a sure way to get drone eggs deposited—and this I can effect even from a young queen, as well as from an old one. All who have visited my "queen nursery" in queen raising time, well know my process for getting large, healthy, and prolific queens in nucleus hives. My method is this: The nucleus is filled full of bees, which are confined from twelve to eighteen hours. Then they are allowed to fly out. As soon as I can prepare the brood (eggs just hatching) they are furnished with material to raise queens; furnished with feed, and a good supply of this kept up till the queen cells are sealed over. When the time arrives for the cells to hatch (from ten to fourteen days after the nucleus is started), those that cannot be separated without injury, are put in a small hive that has glass sides, so that both sides of the comb can be seen. Here they are kept, and as fast as they hatch put in cages, with a few workers, and then introduced to such nuclei as are in condition to receive them kindly.

I confess that I find the operation of introducing young virgin queens over to nucleus hives, a very difficult job. In many cases, where the queen is not hugged to death, her wings are so injured that she cannot fly. Of course such queens must be destroyed. Where cells can be transferred, it is always advisable to do so. I have removed a laying queen from a nucleus hive, at the same time inserting a queen cell ready to hatch, and in the course of an hour had the young queen safely introduced. But this is not a safe way; the hive should be kept queenless at least twelve hours.

During an experience of twelve years in raising queens, I never knew one to make her marriage flight until she was five days old; and I have watched them very closely too. In the months of June, July and August, they will be fertilized when five days old, if the fifth day is warm and pleasant; and in forty-eight hours later, eggs can be found in the cells, if the hive contains plenty of workers and food. One day, in last June, I knew of forty-five queens being fertilized in the course of two hours.

For breeding, I use the largest, purest, and most prolific queens I have, and keep them in nucleus hives during the breeding season. I do not allow drones to be raised from the same queen used for breeding queens, and intend to cross my stock as much as possible. All the queens I raised in May last cost me five dollars each; and I do not think that queens can be raised profitably in May. A full stock of bees that will make five nuclei in May, would make ten fully as large in June. Then, too, they will require less feeding at the later period, as forage is then generally abundant in this part of the country, the weather warmer, and four times as many queen cells will be constructed. Fifty nucleus hives, started the first week in August,

constructed over four hundred queen cells; if started in May the same number of bees would make only about one hundred and fifty cells.

I have read all that has been said in the Journal about rearing queens. Now, I will challenge the most scientific beekeeper and queen bee-raiser to produce from ten to one hundred queens better than I will raise in nucleus hives, five inches deep, eight inches from side to side, and five inches from front to rear. The queens shall be selected at random, from two hundred and fifty nucleus hives, between 1st of June and 1st of September. Any man has the privilege to call within the time named, and select the queens from any hive he pleases; and if he finds better queens than he can find in my hives, he will not be asked to pay for those he has from me. I have always had better success in raising queens in nucleus hives than in full full stocks; and, as a general thing, I can get more queen cells constructed by putting one quart of bees in a nucleus hive, than I can get in a full stock.

During the month of June, when the honey harvest was at its height, I removed the queens from two of the fullest colonies I had. The result was, sixty odd cells were built, about twenty producing good large queens; from the rest came the smallest queens I ever saw. The large queens were started from eggs just hatching; whereas, the small queens were reared from larvæ, just about ready to be sealed up when the queens were removed. And as the larvæ, from which the smaller queens were reared, were several days older than those from which the large queens were raised, of course the small queens hatched first; and if the cells had not been removed from the hives before the first queens hatched, those hives would have had very small (ten days) queens. This has always been my experience in raising queens in full colonies. Queens raised in nucleus hives, after the plan I have given in this article, will be found large and prolific. H. ALLEY.

Wenham, Mass., Oct., 1871.

Michigan Beekeepers' Convention.

AGRICULTURAL COLLEGE,
Lansing, Sept. 29, 1871.

EDITOR AMERICAN BEE JOURNAL.

DEAR SIR:—The annual meeting of the Michigan Beekeepers' Association, which took place at Kalamazoo, was well attended, the papers read very able, and the discussions very lively and interesting.

One gentleman present, Mr. Bingham, of Allegan, contended that the black bee was superior to the Italian. The only point of superiority named was greater readiness to store in boxes. This opinion was assailed by nearly all present.

Mr. Bingham uses a hive with frames only five inches in depth. With this, and black bees, he has taken sixty pounds of box honey from each of his colonies. Said honey was reported to be the best sold in the Chicago market this season.

Favorable reports of the honey season come from all quarters.

Foul brood was reported in Wayne, Oakland, Monroe, and Lenawee counties.

Valuable papers were read, all of which I will send you, in hope you may find room for them in the Journal.

A. J. COOK, *Secretary.*

REPORT OF PROCEEDINGS:

Kalamazoo, September 19, 1871.

The annual meeting of the Beekeepers' Association of Michigan was held in Corporation Hall this evening. President A. F. Moon, of Paw Paw, was in the chair, and A. J. Cook, of the State Agricultural College, was secretary. But a very few members were in attendance.

The topics of foul brood and diseases of bees were discussed. No one knew of any remedy for foul brood, but it was the opinion of the speakers that it was caused by the want of proper ventilation in the hives.

Adjourned till to-morrow morning, at 8 o'clock.

SECOND DAY.

Kalamazoo, Sept. 20, 1871.

The meeting was called to order by president A. F. Moon, of Paw Paw. J. H. Porter was appointed secretary. Dr. Bohrer, of Indiana, was appointed president *pro tem.*

Mr. J. H. Everard, of Kalamazoo, proposed as a subject for discussion, "What is the best method of extracting surplus honey?" Mr. Everard related his experience and what he had seen at Allegan in hives used by Mr. Bingham. Mr. Bingham took from one hive nine boxes, containing six pounds each. Mr. Marvin asked, "What is the shape of the hive and the management?" Dr. Bohrer stated that if the boxes be too small, enough bees cannot be clustered to keep up animal heat; therefore in cold climates two sets of frames will be preferable to small hives.

Professor Cook, of Lansing, suggested that the subject would be dsicussed to-morrow when it would be in order. On the subject of artificial fertilization, Mr. Everard said that in his experience artificial fertilization had proved a failure. Professor Cook related his experience in the trial made in the green-house of the Agricultural College under the most favorable circumstances. Failure was the result. Mr. Knapp had tried Mitchell's plan pretty thoroughly and practiced the plan. After visiting Mr. Mitchell and getting all the information, he did not succeed in a single instance. He tried thirty queens and lost them all. Mr. Balch stated that he had one queen with a defective wing, which was fertilized and was prolific. In other cases he failed. Mr. Moon stated that he received a letter from Royal Oak stating that a wingless queen was fertilized and became very prolific. He thought the old way was the best. He said that by feeding early in the spring and getting them out before black drones were matured he was successful in raising working bees. Mr. Balch stated that by hiving bees very late he had succeeded very well, and thought it better than early in the spring.

Mr. Marvin expressed his faith in green-house fertilization, and thought if everything was dry, so that their wings be kept dry, it would be better. Professor Cook replied that in the experiments he had made every precaution had been taken—that the drones seemed frightened, and that among all animals it was hard to bring about copulation under fright.

Mr. Marvin thought bees might be educated so that drones would not be frightened. Mr. Clements thought that drones kept in confinement would not be so frightened. Mr. C. Balch had failed in all his efforts at bee fertilization. Mr. Moon said that twelve or fourteen years ago he had tried a plan which cost more than it was worth. Dr. Bohrer stated that there was a time when he hoped it would be a success, but that he thought in many places it was not necessary. In his locality there were very few black bees, and, therefore, he was not troubled with them. Bees might be confined to the hives by cutting notches in a piece of tin. Bees cannot be educated beyond the laws controlling their natures. He is never troubled with moths in his Italian bees; he frequently finds them among black bees; he thinks that many may have been deceived—that the bee was fertilized after entering the hive. Mr. Bingham, of Allegan, said he would like to know the superiority of the Italian bees over black ones. He thought there was a good deal of humbug about the claims set up for Italian bees. He had found them no better than black bees.

Then the question of artificial fertilization was on motion laid on the table, and the question of the relative merits of Italian bees was taken up and discussed by the meeting. Dr. Bohrer gave his experience with Italian bees. They are more docile, allow themselves to be handled with more ease; less trouble to make money from honey.

Professor Cook thought there was another point, as to their stinging. They worked on red clover; he observed them so working. They were not known to rob others, but made more honey than black bees around them.

Mr. Porter said he knew that black bees were worse at robbing, and were defeated in their attempt on the Italians at the Agricultural College. Mr. Bingham said the difference might be accounted for in the difference in handling. Italians were more addicted to swarming, even when they had no royal cell. The black bees do not swarm without royal cells. Italians fall short of what is claimed for them.

Mr. Moon said he had had black bees swarm, and put them back seven times without a sign of a royal cell. The Italian bee has proved very valuable. He would rather have one Italian than two black swarms. His greatest argument was that they would cling to their cards, when the blacks by puffing in a little smoke would rush out of the hive, and that it was almost impracticable to practice artificial swarming.

Mr. Everard never knew a single swarm to be injured by worms, no matter how much reduced.

Mr. Moon was glad that the subject had been agitated. He was of the opinion that what has been said about Italian bees was exaggerated. Mr. Marvin asked Mr. Bingham if he had any experience in "slinging" honey with black bees? Italian bees could not be made to work in boxes. In Germany they do not pretend to use boxes, but confine themselves to frames. He does not believe that worms ever destroy bees until they have been so reduced that they were as good as dead.

The discussion was continued for some time, when on motion the subject was laid on the table.

The question was next considered as to the propriety of offering premiums for the best hives and honey. A little discussion took place in regard to what a hive should be, and what should be done to save farmers from being swindled. Mr. Bohrer thought the best way was to instruct the farmers beginning in agriculture. When men are properly educated they will be able to judge what a hive should be.

It was suggested that a hive should be cheap, simple and durable. Simplicity was strongly recommended.

A motion was made and carried that a committee be appointed to say what a good hive should be, and report the same to the convention this evening. Messrs. Rood, Bohrer, and A. C. Balch were appointed such committee.

The convention then adjourned till 7 o'clock this evening.

EVENING SESSION.

The continued illness of President Moon compelled him to go home. Hon. H. Huff, of Jonesville, was appointed chairman *pro tem.*

The meeting was addressed by Mr. Rood, on the subject of "Foul brood." His paper on the subject was quite lengthy. He gave a full description of this fatal disease among bees, and how to distinguish it, and gave some sage advice in regard to handling other colonies or permitting other bees from using the honey of the affected colony. It is contagious as small-pox is to man, and as fatal as cholera. The speaker could assign no cause for the disease, nor any effectual remedy. After the paper had been read, a very general discussion ensued, but the result was to leave it with no more light than when the meeting opened, as regards the cause, or of any cause for it.

Mr. M. M. Baldridge, of St. Charles, Ill., then read a paper on the Honey Extractor, its management, and the treatment of extracted honey. A very long discussion followed the reading of this essay, during which Mr. D. S. Heffron, of Chicago, made some very interesting remarks in regard to the treatment of honey after extracting it, and of preparing it for market. When the discussion closed, the committee to whom was referred the matter of hives, &c., made their report through Dr. Bohrer. It is as follows:

We, the committee to whom was referred the matter concerning the requisites of a good bee-hive, have had the same under consideration and submit the following:

1st—For out-door wintering we recommend a hive not exceeding twelve inches in depth nor less than ten inches inside of the breeding chamber, for use in northern latitudes.

2d—For in-door wintering a hive may be made as shallow as five inches in the breeding apartment.

3d—We believe the breeding chamber should not contain less than 2,000 cubic inches actual breeding space, nor more than 2,500, the same to be so constructed as to admit of upward ventilation at pleasure, and the entrance to be contracted so as to admit of no more than one or two bees to pass or repass at the same time during the winter, believing that every heavy current of air being allowed to pass through at this season of the year will serve as a cause of disease.

4th—We believe that a hive to be cheap in cost to the beekeeper, and, at the same time, adapted to procuring honey, either in the comb or by the use of the melextractor, should be so constructed as to admit of boxes of shallow frames, or of frames equal in size with those of the breeding chamber. This we regard as a hive well adapted to general as well as special purposes.

5th—We would not under any circumstances, recommend or encourage the use of any but movable comb hives, feeling well convinced that no other method will enable the beekeeper to make the profession successful and profitable.

E. ROOD,
G. BOHRER,
A. C. BALCH.

After some discussion, in which the hive question was pretty thoroughly *ventilated*, the resolutions were passed with only one dissenting voice.

The meeting then adjourned till to-morrow morning. There was quite a large attendance this evening, and great interest was manifested in the discussions.

THURSDAY MORNING.

Kalamazoo, Sept. 22, 1871.

Mr. McKee, of Laingsburg, occupied the chair this morning. The following officers were elected :

President—Ezra Rood, of Wayne.

Vice President—Mr. McKee, of Ingham.

Secretary—A. J. Cook, of the State Agricultural College.

Treasurer—Arad C. Balch, of Kalamazoo.

Dr. Bohrer, of Indianapolis, was made an honorary member. The subject of hives was again taken up. Mr. Bingham defended side opening hives. Dr. Bohrer and Mr. Rood opposed them. Dr. Bohrer preferred the Langstroth hive.

Mr. Baldridge used an extra hive and changed his bees in the spring. This system, he said, worked well with him.

Dr. Bohrer thought the Convention ought not to act on the subject. Practical beekeepers understood what they wanted.

Mr. E. Gallup read a very carefully prepared and interesting essay on "Artificial and Natural Queen Raising," for which the society voted him their thanks.

Mr. Marvin read a paper prepared for the meeting upon "The Production of Honey and the Forage for a Great Yield of Honey." It was well received, and the author was by the meeting thanked for the same.

The association then adjourned, to meet again this evening.

EVENING SESSION.

The feature of the evening session was the paper read by Dr. Bohrer on the subject of "Drones and Queen Bees." The views set forth in the paper were endorsed by members, especially by Professor Cook, of Lansing, who is well known as an accomplished entomologist, and by Mr. Heffron, another close observer of insect life.

The secretary was instructed to notify delinquent members to pay their dues forthwith.

The subject of foul brood was brought up again. Mr. Edward Mason believed foul brood was caused by the death of the larva, caused by chilling when the hives were exposed. This view was vigorously combatted by Mr. Rood, Dr. Bohrer and many others.

Secretary Cook announced that there would be a session to-morrow morning, when some important questions would be introduced for discussion.

The Convention then adjourned.

[For the American Bee Journal.]

A Trip to Michigan.

MR. EDITOR :—Sometime previous to a regular meeting of the Michigan State Beekeepers' Association, held at Kalamazoo, during the 19th, 20th, and 21st of the present month, I received an invitation to be present with them and participate in the discussion of the different subjects that might be brought before them during their several sessions. But what has, by some means or other, got to be termed *the drone question* (which phrase is understood to have reference to the influence exerted upon the drone off-spring of the queen bee, through the medium of her fertilization, as well as the ability of a drone from a virgin queen to impregnate a queen), was more particularly assigned to me than any other. As my views, however, on that subject will be likely among other parts of the proceedings, to appear in print, I will not here repeat any portion of the argument which I used in support of the Dzierzon theory. I say in defence of the Dzierzon theory, because I heartily endorse it, and because such a subject would naturally embrace his theory, or rather bring us to consider the correcting of his views. But I will confine myself to a description of what I saw and heard during my trip. My route lay by way of Fort Wayne, Indiana, at which point a change of cars was necessary. From this point I could reach Kalamazoo by taking either of two different routes—one being direct and the other leading thither by way of Jackson. But as the latter route is the longest by at least sixty miles, I sough to avoid it if possible ; yet from neglect on my part to look at my railroad guide, or, still worse, the neglect of the ticket agent to give me what he knew to be reliable and truthful information, when I asked it of him, I soon found myself on the way to Jackson. As it was

now too late to retrace my steps, I concluded to make the best of a bad thing, and accordingly spent time in looking at the character of the soil and the improvements growing out of industry and general enterprise among the people who inhabit the country through which the road runs, I found much of the soil to be of such quality as to be well adapted to the production of nearly or quite all the crops peculiar to our Northern States; and as the country in southern and central Michigan is somewhat dotted with small lakes and soil which was once covered by them, it must most unquestionably produce a large amount of honey-yielding plants, of a kind and quality requiring little or no special cultivation. In addition to this, these lakes are surrounded by a soil fertile in the production of the different kinds of grain and roots commonly cultivated by the farmer.

These lands are also mostly well adapted to the cultivation of special honey-yielding crops, such as buckwheat and the different varieties of clover. In fact, the face of the country is such as to effectually guard the bee keeper against excessive drought, as the land immediately surrounding the lakes is low and well calculated to furnish forage for bees during dry weather; and when there is an excess of rain, the uplands will produce the various honey-yielding plants already mentioned. Thus the people of such portions of Michigan as above described, have the natural resources furnished them to make the occupation of bee-keeping highly remunerative.

On reaching Jackson, I found it to be one of the most enterprising inland cities I ever visited. The State prison, located at this point, which I visited, and found its various buildings and shops to be large and well adapted to the preservation of the health of the inmates—the number of which, as well as I remember the statement of the conductor, is at present six hundred and fifty-two convicts. While passing through the shops, where men were engaged at labor, and at learning a trade, in the different mechanical departments, the thought struck me quite forcibly that it would be a very easy matter so to arrange the prison grounds as to admit of a small apiary being kept within their limits. This might not only prove to be a source of profit and income to the State or the capital invested, but would furnish such convicts as are not physically able to engage profitably in other manual pursuits, an opportunity of becoming acquainted with a branch of industry highly remunerative, and at the same time well adapted to weakly constitutions.

On my way from Jackson to Kalamazoo, I found the country to be very similar in character to that already described. On reaching the latter city, I was delighted with its appearance and the enterprising character of its inhabitants. I registered my name at the Kalamazoo House, as I had been requested to do by Prof. Cook, until such time as he was able to meet me; and as he was not in the city on my arrival there, I spent the afternoon on the State Fair Grounds. The fair being then open, made it quite an interesting place to visit. But during my stay in Kalamazoo, I was displeased with only one feature of its regulations—which is the custom of permitting the hackmen and omnibus drivers, while halting in front of the hotels, waiting for passengers, to indulge in one continued and unearthly cry of—"Here's your hack for the Fair Grounds," or for the railroad, as the case chanced to be. This is not only very impolite, but very disgusting to such as are in possession of perfect hearing. Police regulations should compel those men to address travellers in an ordinary tone, not above that used in common conversation.

On my return from the Fair Grounds, I met Prof. Cook, and found him to be what I hoped to find, an agreeable and intelligent gentleman, besides being tolerably grod-looking; but as that is a matter of not very much importance to any one except his wife, I shall not say much about. Mr. Porter, one of the Michigan Agricultural College students, was in company with Prof. Cook. With him I was made acquainted and found him likewise to be a gentleman of intelligence, and of good looks also. I deem it a matter of some importance to the unmarried female portion of the bee-keeping fraternity to make mention of this latter fact, as Mr. P. has not yet, I believe, committed matrimony. He is well posted in the habits of the honey bee, and long may he live.

At eight o'clock in the evening I went, in company with the above named gentlemen, to Corporation Hall, where a number of bee-keepers had assembled, among whom was Mr. Marvin, of Illinois, who is a beekeeper of as good sound sense and wit, as any with whom I have met. The meeting was called to order by President Moon, and several subjects of interest were discussed during the evening. In the afternoon of the next day, I had the pleasure of again meeting with my much esteemed friend, Mr. E. Rood, of Wayne, Michigan, who always adds materially to the interest of beekeepers' associations, by his solid argument and wit. Mr. M. M. Baldridge, of Illinois, was also present. From him I learned a new method of disposing of drones while in the egg state. The plan is rather novel and somewhat funny, yet I think will prove effectual. They are disposed of by pouring cold water into the cells containing the eggs, by which they will be chilled to such an extent as to prevent their hatching.

I met a number of other gentlemen, whose names I cannot now recall; but taking the members of the Michigan Beekeepers' Association all in all, they are certainly a good body of men. Too much praise cannot be given to Prof. Cook for the efforts he is making, and the success he is meeting with, in the advancement of apiarian science at the Agricultural College of Michigan, where bee-keeping is taught the students, among other branches of industry. By this means an intelligent and scientific class of bee-keepers will soon be scattered throughout the different parts of the State; and should the efforts of both the College and the State Association be kept up, as now set in motion, the State of Michigan will always hold her position of prominence in bee-keeping interests.

Alexandria, Ind., Sept. 26, 1871. G. Bohrer.

[For the American Bee Journal.]

The Production of Honey.

A Paper read before the Michigan Beekeepers' Association, September 21, 1871.

By J. M. MARVIN, of St. Charles, Ills.

To produce honey in large quantity, a great deal depends on the beekeeper. He or she should have natural or acquired ability, to have any large amount of success, just the same as in other branches of business. The stock of bees should be of the best character, and kept up to the highest standard of excellence. Good success must be had in producing large quantities of surplus honey, stored by light-colored, good tempered bees. Nothing short of this will satisfy the American bee-keeping public at present.

In small and large apiaries a swarm or a stock, or more, will show superior working qualities, by sending out sometimes double the number of workers to the fields, that other hives of equal numbers do. What is the cause? Or how can we improve the working qualities of such stock at large? Italian stock at their first introduction, and our native stock in newly started apiaries, are generally better workers at first, or until they are bred in and in too long, without a change of stock. Some close observer may say a swarm or stock, or more, may get possession of a limited field, and hold possession by beating others off! We should say, thereby showing their superiority.

The superiority of the Italian bees may be seen while working on the flowers. We have seen five of these bees on a single thistle head, and more on a squash flower. Not so many of the more wild black. These are off on the first approach of a neighboring black bee; to say nothing of the well-bred yellow bees, which stick to the source of feed until their bodies are as large as some queens.

It is now quite easy to improve any valuable quality in bees, as we have control over the hives, combs, and bees, and can rear males or females from any particular mother, at pleasure.

The atmosphere has an effect on honey producing, which we can control in some measure by planting honey producing trees and shrubs for shelter, as well as honey, when enough do not grow naturally for the stock. The atmosphere is more apt to be good for the production of honey over an uneven surface of country. More or less honey producing trees, shrubs and plants are left standing on such uneven land, as it is hard to cultivate, and more or less water is near or on the surface of such land to modify the effects of the atmosphere. A variety of soil, also, is generally found in the uneven sections of country, and is favorable to the growth of the different species of trees, shrubs and plants. Some seasons the same varieties of plants will yield more honey on light sandy soils; in other seasons the low, moist, rich land will give the only yield of honey from the same variety of plants. Fruit trees, shrubs and plants are generally planted on a variety of soils, and usually yield enough for the stock. If not, more should be planted.

Alsike clover sometimes smothers itself out on some soils and seasons, by its excessively large growth; but it yields honey every time, on any soil, and in all seasons, as far as heard from. Buckwheat is variable in its yield, but pays me well in honey alone. Polanisia purpurea yields no honey with me, in two years' trial on three varieties of soil. Mr. Fairbrother, of Jackson county, Iowa, writes me he has thirty years' experience with it, and likes it well, although it is variable in its yield. He also writes that he grows raspberries, buckwheat, and other plants for honey; and has had twelve years' experience with melilot or sweet clover, and now has ten acres of it. I conclude that the ten acres are enough for their stock, as the partner wrote me several years ago that they should increase the acreage until they had forty, unless a less quantity proved sufficient. It is the best honey plant with me.

There is no doubt that borage and catnip will pay to cultivate where labor is cheaper and stock more numerous, as these plants need more thorough culture than others, at least in this section.

To get large amounts of surplus honey, a regular business should be made of keeping good strong stocks of bees, at the time or times of a yield of honey in the flowers. It will pay to feed a stock of bees, at the right time, the right amount of feed, to rear bees with, not to have the feed stored in combs for sale. Reducing the stock in the fall to a good working number, and using the combs, honey and bee-bread in the spring, as capital to work with, is a paying business to employ the time of the keeper. There is probably no man living at the present time, knows the full value to a stock or stocks of bees of judiciously used feed. I make the assertion that the same value of feed fed to a stock or stocks of bees, pays better than any other stock feeding on the farm. Any one doubting this, will please give me the name, kind of stock, value of feed, time, and place, and oblige the writer.

In the management of extracted honey, it should be kept in a dry, well ventilated room, until it thickens or granulates. After that it can be kept in a cellar. If kept in barrels the hoops should be often tightened, as the barrels shrink more with honey in than when empty. If the honey is put in crocks or jars, it should be kept from hard freezing. We have lost several jars, both large and small, by frost cracking. There is no apparent injury to the honey from freezing. It puzzles some beekeepers to keep some varieties of honey until it is cured or consumed. There are exceptional cases, when the bees need the help of the keeper with the extractor, to secure the honey in the hive for the use of the bees. (It may be the extractor and clearifier in the hive, combs and honey, may check if not cure disease in bees and brood.) A barrel of some varieties of honey, of forty-two gallons, will shrink to forty or less in thickening or granulating; and will expand to forty-four gallons, or more than a barrel, in heating to a liquid state again. Honey

in the combs should not freeze hard enough to break the sealing, as it lets in the air and cold, and the honey granulates more readily—which is not generally desired in comb honey, however it may be wished for in the liquid honey.

To detect sugar in honey, expose it to air and cold, or give it time to granulate. The honey or fruit sugar being similar, grains unevenly round, and more or less soft, varying in different samples in solidity and shape, from cane sugar grains—these being more the form of a prism, and hard.

[For the American Bee Journal.]

The Iowa State Fair—Bees and Bee Hives.

DEAR JOURNAL:—I started from home on the 13th instant, for Cedar Rapids, the seat of the Iowa State Fair this year. My main purpose in going was to be present at the Beekeepers' Convention. I can say I was well paid for going, not only in seeing some of the finest stock in the United States, but making the acquaintance of persons engaged in my favorite occupation, namely, bee-keeping. After looking around at the different departments, I went into one of the halls, and on a table or counter I saw as fine a lot of honey, both extracted and in the comb, as was ever exhibited at any fair. This honey was from the apiary of our friend, W. H. Furman, of Cedar Rapids. His box honey could not be surpassed anywhere, and his extracted honey was very fine. Friend Furman had several observing hives on exhibition, each containing a fine Italian queen. I would say that my prejudice against the yellow-banded chaps has somewhat subsided.

Here we met Mr. Furman in person, and Mr. Editor, if you ever get west of the Father of Waters, you will be well repaid for your time in visiting Mr. Furman; you can depend upon that. The next bee man we met was a Mr. King (if we mistake not the name). He, like ourselves, is just making a start. We are confident he will be successful. It cannot be otherwise. A man that carries such an honest-looking face, and is so courteous in his manners, will make any hive of bees hum with joy when he is present. Not only in the presence of bees will his presence be felt, but wherever he may go. The next beekeeper we met was Mr. C. H. White. In him we found a bee man in every sense of the word. We have no fears that he will not be successful in his favorite occupation, for he takes the JOURNAL. Our next movement was to the bee hives. Here we met Mr. R. R. Murphy, well known to the many readers of the Journal. We were glad to make his acquaintance, and hope it may continue for life. Friend Murphy had two of his honey extractors on exhibition, and also a Langstroth hive. The workmanship was good on both hive and extractors. May success crown his labors abundantly. The next acquaintance we formed was that of your correspondent, Mr. J. E. Benjamin. We could plainly see that his native element, in which he likes to be, is the apiary. In the hands of such men as friend B. a hive of bees will prosper anywhere. May he ever be successful in his enterprise. We found Mr. Frank Krause a go-ahead bee man—one who understands the principles of bee-keeping. We hope our acquaintance with him may continue. Men like him are always successful. Paul Lattner, Esq., and Mr. W. S. Goodhue are bee men "all over." Bee-keeping was the favorite topic on which they dwelt. There are many others whom we would like to introduce to you, Mr. Editor, and to the readers of the Journal, but lack of space forbids us to lengthen out "our piece."

All the bee men we met were men of intelligence; none of the old fogies of the box hive; but modern beekeepers in every sense of the term—men, who, by their presence and their support will make the "CENTRAL IOWA BEE-KEEPERS' ASSOCIATION" a *success*.

The bee hives on exhibition, according to what each exhibitor had to say, was truly a grand collection of hives. A person had choice of a hive from the new fangled moth trap device—that will catch every moth that comes in sight, to the plain, simple, readily understood, and easily managed Langstroth. We don't want any of those hives that will catch and kill, or scare the life out of every poor moth that comes along. Yet not only do some of these, it is claimed, perform this important feat, but all you have to do is to put a swarm into one of these splendid palaces, shut up every entrance but the moth trap, and set it in a white clover patch or a buckwheat field, and begin to take off the surplus honey as fast as the combs are capped over—and your triumph as a beekeeper is secured. It will astonish the uninitiated to see the large amount of surplus honey that may be garnered by simply letting the "busy bee" look out through the moth trap of some of these fanciful contrivances.

Another thing we cannot refrain from noticing. We find friend Langstroth has almost ruined bee-keeping by inventing that hive of his. He forgot to put in a few strips of tin here, and a few carpet tacks there; and missed it much in not giving his frames the proper twist and size. They are a little too short at one end, and a little too long at another, and the bees will sometimes stick them fast with propolis—why didn't he think of it and stick on a piece of candy for them to nibble at instead, to "sweeten their imagination," and teach them to quit using bee-glue? Then, too, his frames are too close together, or perhaps a little too far apart; and you have to take off the top and remove that plaguey honey board to get a sight of them. Why didn't he invent a hive that opens automatically, and manage to have the well-filled honey combs lifted out by a spring, without disturbing the poor little tired bees? Alas, having failed to do this, he has left to others the necessity of setting their ingenuity at work to concoct some all-embracing contrivance, with a moth-trap appended, constraining the poor bee after laboring hard in the field and returning home toil-worn and travel-stained, to crawl over, and under, and through the mysterious labyrinths of a "trap" before it can reach the inside of the hive proper.

Then again, Mr. Langstroth (like the anticipating ancients, who stole and used all our happy

thoughts) has *infringed* on sundry new inventions—his patent being dated 1852, and theirs in 1870! Alas, my patent right friends, after Mr. Langstroth set the "egg" on its end, anybody can do it. Why is this? Why are you forever bellowing against the Langstroth hive? Some of you are as old as Mr. Langstroth; why didn't you invent hives with the movable comb principle and introduce them, and reap honor in an honest way?

G. W. BARCLAY.

Tipton, Iowa, Sept., 1871.

[For the American Bee Journal.]

At the Iowa State Fair.

MR. EDITOR:—We propose relating what we saw and heard, about bees and bee hives, at the Iowa State Fair.

Upon entering the fair grounds we were not long in finding the apiary department, which was well represented by Mr. W. H. Furman, of Cedar Rapids, with a great display of honey in boxes and extracted honey in glass jars, which attracted a great deal of attention.

The hive department was represented by different parties, of which we will speak as taken down on our memorandum.

The first hive we examined was a bee hive (patented of course), by T. F. Engledow. This gentleman was very enthusiastic, and explained his hive in a manner that would make the uninitiated believe it was a perfect palace. Well, we will commence with the frame of this hive—a Langstroth frame, with some modifications, hung by means of metal straps forming hooks, which hang on iron rods. The frame has a centre stay of pine wood, about three-quarter inch stuff. I asked him if he had that in for the bees to keep warm, as it takes up the very best part of the frame, and divides it into two, separating the brood circle, instead of having the brood circle in the centre of the frame. Any beekeeper can see the disadvantage of having heavy strips of wood passing through the frame. Between the frames and the bottom of the hive is a space of three or four inches. I said to him the bees would build comb between the frames and the bottom. The answer was that they had not done so. I wish you could see the entrance of his hive; you would laugh at the absurdity.

The next hive we examined was Jasper Hazen's non-swarmer. In my opinion it is a poor thing for a beekeeper who has many bees to attend to. The frames fitting tight to the sides of the hive, we asked the man attending it, how he got the frames out when they were stuck with propolis. He said he could take them out very easy, but I could not see it.

Then followed the Common Sense Bee hive of D. R. Reed, of Kansas. For my part, I could not see where the common sense comes in. If *brass* and blowing will make it such, the proprietor is capable of doing it. Oh, beekeepers, this is the hive that has a moth trap, in which can be put some secret bait which attract and destroy the moth and not kill the bees. It also has a device to shut the bees in the hive in winter, so that they cannot fly out and get chilled. The frames hang on the rabbet with screws in the frames, and the least jar puts them all in motion. The honey box arrangement, too, is worthy of special examination, and admiration! In my judgment this Common Sense Bee hive is a humbug, and as great a swindle on the credulous beekeeper as was ever put before the American people. The proprietor is doing all he can to introduce it. He has advertised it in large letters on his horse blankets, and makes all the noise he can about it, when he can get a crowd to listen to him.

The next hive was that of Mr. W. R. King. It has a moth trap and the frames are all tight-fitting at the top.

Then followed a model of a bee house, invented by a man named Glass. It would have done you good to hear him give a description of the structure. He said any kind of bee hive could be put in it, and they would do better than out of it. He showed us the entrance for the bees. It is made of tin. He said the moths would fly around the entrance and could not get in, and would continue flying around so long that they would die of exhaustion. He said he had seen them do so, and knew it was a fact. He also had three blocks clamped together to represent a beehive, and a small wooden lever to lift them off the shelf, to put under another box for the bees to work in. He said he always had three on at a time, and took off the top one, and that he never had any experience with movable frame hives. He stated also that the drones laid eggs, for he had seen them do it, and he had kept bees for twenty years. I asked him if he took the *American Bee Journal*, or any other bee paper? he said, No. I felt very sorry for the old man, for I thought he would never get to know what progress had been made in bee-keeping. When will all this humbugging stop, and these sharks with pretended or useless patents cease to gull the people?

Mr. Furman had a stand of Italian bees on the fair ground, and showing the people how to handle them and the frames. Mr. D. R. Reed had the old dodge bees in his hat, while talking to a large crowd. Both were ordered to take their bees off the grounds, as the officers said it was against the regulations to have bees flying there. We all looked "down in the mouth," and had to forego seeing bees handled that day, feeling very indignant at the officers. But Mr. Furman went to the secretary for redress. It seems there was a misunderstanding about the matter, and the next day Mr. F. exhibited the bees again, and extracted honey from the comb with the honey extractor, on the fair grounds, as before, with satisfaction to us all.

We also had a meeting of beekeepers, and took the preliminary step to organize a Beekeepers' Association, for Central Iowa. The secretary was instructed to send you a copy of the proceedings.

Bees have done well in our section, this season.

JAMES RIGG.

Iowa Falls, September 21, 1871.

Chautauqua County, New York.

THE BEEKEEPERS IN COUNCIL.

Second Annual Convention.

ALL BEES AND NO WASPS.

The 2d Annual Convention of the Chautauqua County Beekeepers' Association, J. C. Cranston, President, was held at the Chautauqua House, Mayville, Tuesday, Sept. 12th,—the same place of meeting occupied by the "Wasp" Convention last year. By reason of the large number held as witnesses or jurors at the Court House a goodly number who had intended to be present were deprived of the privilege. Consequently Geo. W. Norton's expected essay on "Wasps," and Dr. Horton's lively description of the manner in which bees inevitably "go" for himself and horses, and how he has been the victim of two or three runaways, and nearly lost a span of valuable horses because of bee stings, and how he hated bees and their honey, and how the bees returned the compliment—were lost to the Convention. Still the session was one of profit and interest. Some ten towns were represented, and the time mainly occupied by an informal debate in which each related their experiences, and during which much valuable information was elicited.

O. E. Thayer, of Carroll, reported 16 stocks of blacks bees. By reason of the drouth the honey was harvested early and he realized less than last year. He also lost by a neglect in the spring to put on the surplus boxes in the proper season. His honey readily brought him 30 cts. a pound. He was now Italianizing his entire stock.

J. B. Knowlton, of Clymer, had 16 stocks in the spring, which had increased to 40. A part were Italians. He should continue Italianizing. Owing to the weak condition of his stock he had but little surplus honey. The Italian bee stored more than the blacks. He used the Quinby movable comb hive.

M. Cook, of Ellicott, had 10 swarms black bees in the spring in the old-fashioned box hive. Eight of them had yielded 10 new swarms: two had flown away. He got two swarms by alternation in 18 days. His object had been to increase his stock more than to gain surplus honey. He had 25 new swarms in another place with an average weight, Aug. 1st (honey and bees), of 43½ lbs., the smallest weighing 22½ lbs. He required 20 lbs. on the average to carry a swarm through the winter. Steady cold weather was better than variable, and out-doors better for wintering than the cellar. He had tried it in a dry cellar, but the comb dampened and mildewed. He lost half his bees in trying it. In steady cold weather bees become torpid and will not eat. He ventilates at the top of the hive, and feeds his bees at the top. He transfers after swarming as early as possible—3 days to 10. He would not wait 21 days. If transferred in April old comb would generally have to be put in and the more of that the worse you are off. New comb would do. You also destroy more or less brood by transferring in the spring.

N. M. Carpenter, of Ellery, has been in the bee business 12 or 14 years. For several years he pursued it indifferently, but finding it pleasant and profitable he gave it more attention. He considered it more profitable—two to one—than any other branch of farming. He commenced with the Quinby hive and rarely lost a swarm, and his bees had uniformly paid him 100 per cent. This year he had put in 28 swarms in a hive of his own construction and was still better paid. The more care he gave his bees the more profit. Last year his bees turned him an average income of $26 a hive. This year he started with 32 swarms—six Italians—used movable frames, and had realized over 1000 lbs. surplus honey, and 81 new swarms, which he had put in 40 hives, and which would bring him $15 a swarm. His bees swarmed too much and robbed badly. He got a first swarm from every hive. If a non-swarming hive could be invented, which would enable them to control the movements of the bees, the profits would be much greater. He could not yet decide upon the comparative merits of the Italians and blacks. The former would not work on red clover or on the same flower with the black, but they would work when the black would not, and were more active and vigorous. He would differ with Mr. Cook upon the amount of honey necessary to winter stocks.—He had got through on 5 lbs., and then again it had taken more than 20. He handled his bees a great deal and was familiar with their condition. He had noticed 8 or 10 stocks placed in a row, ventilated alike, which appeared alike in all respects in the fall but in the spring some had their honey entirely consumed and others but a little—some weak and others strong. He wished to ask the occasion of this difference.

J. M. Beebe suggested that the stocks might have been robbed. Robber bees act very often like young bees just commencing to fly, and will rob when supposed to be flying. Mr. Carpenter had tested the matter and did not believe that to be the reason.

W. R. Cook, of Harmony, said bees had not done as well in his section as last year, because of the drouth—better the fore part of the season than later. He wintered 43 swarms black bees in good condition—lost none— had increased to 75 swarms. His object had been the obtaining of surplus honey. Not all of his stocks had swarmed. He should have in all about 1,700 pounds of surplus. He used the Kidder hive. Mr. Ford, P. M. at Steadmanville, started in new in the spring with five swarms which had yielded nine new swarms, and sufficient honey to winter. No surplus honey except in the Kidder hives. Mr. Newhouse also started with five swarms and had gained seven and 200 pounds of surplus. He had studied bee-keeping since he was 18 years old. He could tell whether a swarm had lost its queen by observation, without examining. He could generally prevent an increase of stocks by giving plenty of box room.

Mr. Carpenter could not prevent at all in that way.

Leroy Whitford, of Harmony, used artificial swarming and liked the system. He was troubled with too much swarming. One swarm a season

was enough. He had 13 swarms in the spring and 27 now. Had made but 270 pounds of surplus. Two of his stocks were Italians. He had noticed that they were more reluctant to begin working in boxes than the blacks, but that they would work when common bees would not. On the whole he could give them the preference.

Wm. D. Onthank, of Portland, had five swarms of black bees in the spring after losing seven by too much swarming the season before—three swarms to a hive. This year the five swarms produced four, and 130 lbs. of surplus. The first swarm came out July 1st, which is late. He prevented swarming by promptly taking off the full boxes and putting in an empty one. He wintered out doors in preference to the cellar, but would protect them from the wind.

Mr. Whitford gave his bees all the box room he could—did no good.

B. W. Cook had a six-year-old swarm he had treated in the way mentioned by Mr. Onthank, and it did not swarm. He sold it and it swarmed *four times*. That was all he would say.

Mr. Knowlton stated that he had kept a strong heavy swarm four years without swarming. He put a large cap on the hive, and it swarmed *five times*.

Peter Miller, of Sheridan, had obtained from 36 stocks 38 new ones and 1500 lbs. of surplus.

Jos. Cook, of Sheridan, had obtained from 23 swarms black bees, 12 new ones and 600 lbs. of surplus.

J. C. Cranston, of Sheridan, stated that his bees were, or had been, of the common variety, but that now half of them were Italians. How they came so was to him a great puzzle.

J. M. Beebe answered that his black queen had unquestionably mated with Italian drones in the neighborhood.

Mr. Cranston further said he had obtained 200 lbs. of surplus from four swarms.

Oliver Waterman, of Stockton, commenced in the spring with 12 swarms, all in Langstroth's hives. He commenced feeding a part as soon as the weather would admit. His first young swarms, from bees he had fed, came June 5th, and from bees he had not fed, June 10th. He took off, July 11th, 17 three-pound boxes from bees he had fed, and 9 boxes from bees he had not fed. June 22d he had three young swarms come out. He put one in the Beebe hive and the other two in Langstroth's. July 10th his Beebe hive swarmed; also took off 27 lbs. box honey. He put that young swarm into a Beebe hive when it also swarmed July 29th, when he took off 27 lbs. box honey. The mother swarm gave 36 lbs. box honey. Total from the mother swarm: three swarms of bees and 90 lbs. honey. One of the Langstroth hives gave him one young swarm and 27 lbs. surplus, July 19th, and the other yielded neither swarms nor surplus. From his 12 year old swarms he had received 17 young swarms and 400 lbs. of surplus. Two of his old swarms, apparently strong and healthy, had neither swarmed nor made honey. He did not understand it.

J. M. Beebe, of Casadaga, had obtained from 15 old swarms of Italian bees, 15 young swarms and 1000 lbs. of box honey. His first swarm issued May 12th, and a second issue May 22d. The old swarm stocked up again and threw out another first swarm July 2d, and a second swarm July 15th. The first young swarm also threw out a swarm July 10th, making six stocks and 100 lbs. of honey from one swarm.

J. G. Harris, of Westfield, had 51 stocks of black bees which had swarmed but little—only eight new. His neighbor, Mr. Rolph, had 47 Italian stocks in the spring and 80 now. He could not see the most honey in the Italians. From a less number of stocks he had realized more honey than Mr. Rolph. He had his doubts about Italians gathering more honey from flowers than the blacks. He once asked M. S. Snow his figures on the amount of honey from his best Italian swarms, and found that his blacks had in one case made two pounds more, and in another four pounds.

Mr. Carpenter stated that he had a stock of black bees in an old-fashioned Quinby hive that had netted him $40.

Mr. Beebe explained that the Italian was superior to the black, because so much more prolific. By placing guide combs in his boxes he has no trouble about their not working. He never had a black swarm earlier than June 10th. He would like the opinions of the rest on the best marketable size of honey boxes. He uses 3 and 4 lb. boxes and can get 3 cts. a lb. more than for 6 lb. boxes.

Mr. Carpenter is satisfied bees will make one-third more honey in larger boxes.

Mr. Beebe did not deny that more honey might be produced, but could they get as much for it? He should next year put out 1½ lb. boxes. If consumers were willing to buy glass, nails and wood for honey, he was willing to sell and make the small boxes.

Mr. Harris said bees would make more honey in 20 or 25 lb. boxes than smaller ones. He thought 6 lb. boxes were marketable and small enough.

Mr. Whitford used a double tier box—bees lost less time than with single boxes.

Lyvenus Ellis, of Pomfret, had 18 swarms in the spring from which he obtained 14 new swarms and 1400 pounds of surplus. He has no Italians.

P. G. Tambling, of Pomfret, has been a bee-keeper for 30 years and has had 70 old swarms at one time. Some 26 years ago he was robbed of all his bees. Two years afterwards a swarm came back to him, from which he calculates he has had over 200 swarms. The last swarm lived through and was one of the three that he found alive in the spring of 1870. That year they doubled. This year he had 13 swarms which have produced him 250 pounds of box honey. The largest yield from a young swarm was 40 pounds. In his experience, the more care that was given to the bees the greater the profit. Hives are of importance, and some are better than others, but the one essential thing is care.

B. G. Watkinson, of North Harmony, commenced April 19th with 11 hives of bees; nine out of the eleven were taken 20 miles in a spring wagon and express 180 miles by rail, then reshipped into a lumber wagon and taken 12 miles,

making in all 212 miles, and when set upon their summer stands he found them in good order. May 11th drones flew for first time. Swarming commenced June 19th. He put the new swarms in the American hives. Surplus honey about 250 pounds, and 12 young swarms. No surplus from the young swarms, and but 40 boxes partly full from the old stock. Received an Italian queen of Gray & Winder, of Cincinnati, Ohio, July 10th, and placed her in a hive of black bees, and now the bees are half Italians.

J. O. Wood, of Chautauqua, has obtained from 18 swarms of black bees in the Beebe hive 16 new swarms and 500 pounds of surplus. From one hive he obtained 80 pounds.

H. P. Woodcock obtained 96 lbs. of surplus honey and three new swarms from two stocks.

Dr. H. B. Arnold, of Pomfret, considered the great want of beekeepers at the present time to be a hive in which bees can be worked exclusively to honey. The Common Sense hive with the proper management would prevent swarming.

Mr. Knowlton asked if Italians were more apt to rob than the blacks. Beebe and Carpenter said yes, but Mr. Knowlton had not so found it.

W. H. S. Grout, of Poland, commenced in the spring with 25 swarms—six hybrids—from which he had taken with an extractor 1700 lbs. of surplus, besides 59 lbs. of box honey. One swarm of hybrids produced two new swarms and 125 lbs. of surplus. From another he got 129 lbs. and one swarm, and from a third 91½ lbs. and one swarm. The hybrids are more profitable than the blacks.

G. D. Hurd, of Corry, favored artificial swarming and large honey boxes.

Essays were read by the President and H. A. Burch, of Sheridan. By request of the Association we shall publish Mr. Burch's address in our next issue.

J. M. Beebe having offered an Italian queen bee, worth $3, to the one who had secured the most honey from a young swarm kept in the Beebe hive, the Secretary opened and read the various letters presented, as follows:

Wm. Smith, of Casadaga, reported 81 lbs. from a single young swarm. He commenced with 11 swarms which had produced him 14 new swarms and 120 lbs. of surplus honey, besides $107 worth of honey which he had sold.

Fayette Munger, of Pomfret, reported 72 lbs.

H. P. Woodcock, of Casadaga, 72 lbs.

Geo. Landers, of Charlotte Center, 72 lbs.

Jos. Cook, of Sheridan, 51 lbs., besides filling the hive.

J. O. Wood, of Chautauqua, 50 lbs. His bees swarmed late.

Wm. Smith was awarded the prize.

The chair announced that Hon. M. P. Bemus had authorized him to state that if the Convention re-adjourned to Mayville, Bemus Hall would be at their service. The hall they now occupied they could also have free.

On motion it was resolved to hold the next spring meeting of the Association at the American House in Jamestown, on the 2d Tuesday of April, at 10 A. M., and the annual meeting at Mayville, on the 1st Tuesday of September.

The officers for the ensuing year were elected as follows:

President—J. M. Beebe, of Casadaga.

Vice Presidents—M. H. Town, Arkwright; J. H. Davis, Busti; O. E. Thayer, Carroll; Henry Harrington, Cherry Creek; Lewis Simmons, Charlotte; J. B. Knowlton, Clymer; J. O. Wood, Chautauqua; Jos. Rhodes, Dunkirk; Merritt Cook, Ellicott; N. M. Carpenter, Ellington; L. Weeks, Ellery; L. Goulding, French Creek; E. Perrin, Gerry; C. E. Randall, Hanover; W. K. Cook, Harmony; Ira Whittaker, Kiantone; H. Q. Ames, Mina; Dr. H. B. Arnold, Pomfret; Wm. D. Onthank, Portland; W. H. S. Grout; Dr. S. Collins, Ripley; H. P. Woodcock, Stockton; Otis Skinner, Sherman; Jos. Cook, Sheridan, J. Vincent, Villenova; J. G. Harris, Westfield.

Secretary—D. E. Benton, Fredonia.

Executive Committee—W. K. Cook, Panama; Ira Porter, Pomfret; Jas. Cook, Sheridan; J. G. Harris, Westfield; Leroy Whitford, Harmony.

On motion, the thanks of the Association were tendered to Horace Fox, of the Chautauqua House, for the free use of his commodious hall.

The Association then adjourned.

From the above report it is apparent that beekeeping properly conducted is entirely profitable, and that the common stock is being rapidly Italianized, and are deservedly growing in favor, notwithstanding their robbing habits. It is also apparent that these semi-yearly discussions are of practical benefit to beekeepers. A portion of the members brought specimens of honey produced, making a larger honey exhibition than is usual at our fairs. There were also on exhibition four kinds of hive—American, Beebe, Common Sense and Kidder.

[For the American Bee Journal.]

Report from Albany county, New York.

The season of 1870 was not a very favorable one for bees in this locality. We prepared for winter eleven colonies—Italians and hybrids; and wintered them on their summer stands, in single inch hives, with cotton batting over them. All came out right in the spring of 1871, excepting that about half of them were weak, in consequence of being weak when put up the previous fall. We fed them rye meal as soon as they would work in it, and also fed them sugar syrup, and equalized the brood. Some of them had too much honey, which we extracted, and thus gave the queens room for laying, which they rapidly improved. We would not do without the invaluable honey extractor, if used for this object alone.

We increased the eleven colonies to twenty-five. Two of the increase were natural swarms, the rest were artificial. All have honey enough to winter well—some of them too much. We have taken three hundred and sixty-two (362) pounds of extracted honey, and sixty (60) pounds in small frames. Nearly all of it is light colored, as there was but little buckwheat honey gathered this season in this section.

We found one colony badly diseased in the spring, so that we received no profit from it, excepting the honey the old combs contained when it was transferred to an empty hive. We took no increase from two others, and obtained only the sixty pounds of honey from them. All the increase and nearly all the extracted honey, therefore, was taken from eight colonies. This does not compare with some reports that we read in the Journal, but we are very well satisfied with it.

Our extractor is a wooden one, well coated inside with beeswax, which was spread on and heated in with a hot sad iron, the square edges of which, fitting into the corners nicely, spread the coating well. The beeswax prevents the wood from absorbing honey, and keeps it sweet and nice.

We run the extractor with the gearing of an apple-parer, which works satisfactorily, since we use stays to keep the wire cloth up to its place.

We think the ladies are pretty well represented in the September number of the Journal, and that Miss Katie Grimm has done remarkably well, both as to the amount of honey obtained and amount of work done, by one so young, and of the weaker sex.

We hope that friend Gallup will send on that "hash" soon, as we are getting awful hungry.

W. D. WRIGHT.

Knowsville, N. Y., Sept. 16, 1871.

[For the American Bee Journal.]

Apiarist, or Apiarian?

MR. EDITOR:—Mr. Choate once reproved an opposing lawyer for "overworking an adjective;" but I am sorry to find the large majority of writers on our science slight a highly respectable *noun* and "push it from its place," by saying apiarian when they speak of a beekeeper. Now, all the dictionaries (Worcester, Webster, &c.) tell us that *apiarian* is an adjective, and means "belonging or relating to bees;" whilst *apiarist* means "a keeper of bees." If, contrary to Washington's solemn warning, we will "quit our own to stand on foreign ground" even in our language—if honest, plain *beekeeper* is not fine enough for us, if we will be pedantic, let us at least be proper, and not run the risk of being styled malaprops.

CRITICUS.

☞ Though not at all inclined ourselves, to "push a respectable noun from its place," we cannot concur in the opinion of our esteemed correspondent that *apiarist* is the proper or preferable word, or that *apiarian* is now or still an adjective only. These words may be so set down in the dictionaries at present; but dictionaries are primarily mere lists, inventories, or registers of the words which a language comprises; and words must necessarily get into use before they can get into dictionaries. They must first come into reputable, if not general use; and that, after all, settles their meaning and their legitimacy, of which facts the dictionaries can simply make record, when the word-hunters, like scientific explorers of other fields, have succeeded in finding, classifying, and arranging them in their portfolios.

In this particular case, Johnson has neither of the words; as in his time the language was probably still too poor to count such terms among its hoarded treasures. They came into common use long after he had finished his lexicographical "drudgery." So far as we can now call to mind, Kirby is still the only English author, who uses the word apiarist; at least he is as yet the only one cited in the dictionaries as a voucher for it. Now, Kirby is or rather was, in his day, very good authority in matters entomological—such as the structure or habitat of a bug or a butterfly; but, even with his Bridgewater treatise to back him, he can hardly be ranked as a classic in English literature—especially when made sole sponsor for the word, against the many belle-letter scholars, who use *apiarian* instead, and have succeeded in giving it standing and currency. By and by the dictionary-makers too will find out that there is another and equivalent term in good use, and will then give us that also *as a noun*, as they did aforetime with regard to *sectarian*, presenting it to us in both capacities, though as nouns we had already the twins, *sectary* and *sectarist*. Nor does the mere *ending* of the word necessarily make it an adjective, or we should have to interchange *veterinarian* and *veterinary*, calling the latter *a noun*, and classing it with equally awkward itinerary.

Bee-father we regard as a better word than either of those under notice, being good old English too, or sound significant Saxon. But, for the ladies' sake (who are fast coming to be denizens of bee-land, and will soon embellish it with "floral embroidery"), we presume it will have to be set aside—and *beemaster* likewise, retaining homely *beekeeper* only, as quite fine enough for us; though it is a term much too comprehensive—embracing many to whom neither the insect, nor the science, nor the fraternity will ever be greatly beholden.

But apart from this, and to better purpose, we desire to say that there are other words besides, now in use in bee-culture, for which the dictionaries have not yet made room; and as the science advances, we shall doubtless be constrained to introduce many more, doomed to wait for registry and formal adoption till the word-mongers happen to light on them in their explorations. Of late the term *apiarism*, seemingly in substitution for bee-culture, is beginning to be used by English writers; though its precise meaning appears to be not yet settled. From the German, too, we have the word *apistics*, which, like *statistics*, *linguistics*, and others from the same source, may be reluctantly admitted, but is yet likely to be sooner or later accepted, as the general term for the science which in this utilitarian age, is destined to take and hold no insignificant rank among those contributing to the wealth of nations.—The German beekeepers are favored with an ampler terminology, or are more easily helped. Their language, besides being more copious, is more plastic and accommodating. They no sooner find, or feel, or fancy the need of a word, than straightways they

coin one for the occasion, and it goes into use at once. The English are more choice and chary, and will long submit to great inconvenience, ere they venture to take the bold step of manufacturing a new word ; and when at last the word comes it is received coyly and looked at mistrustingly, like a strange bee in a hive—and ten chances to one, it is finally, like her, rejected and cast out. As bee men, we should be less exclusive, and set the example of readily adopting any well-formed and expresive word that avoids circumlocution and saves time. We are building up a science, and why should we not have the right or enjoy the privilege of concocting or correcting its nomenclature? Surely, there is nothing unreasonable, presumptuous, or arrogant in that.—[Ed.

[For the American Bee Journal.]

Natural, Prolific and Hardy Queens.

ANSWER TO MR. CHAS. DADANT, IN AMERICAN BEE JOURNAL FOR OCTOBER, 1871.

In answer to Mr. Dadant, I will say that I am not (and he knows it) the discoverer of the fact that artificial queens are, on an average, worthless in comparison with natural queens, and in my articles I have given honor to whom honor is due. I have only corroborated the statements of such experienced and successful beekeepers as Bidwell Bros, of St. Paul, Minnesota, Adam Grimm, of Jefferson, Wisconsin, E. Gallup, of Orchard, Iowa, and of other correspondents of the Journal.

I bought a queen from Mr. Dadant, which he guaranteed should be pure, prolific, and purely mated, and by his letters promised to make all right, if she proved otherwise. Inside of two weeks after receiving her, I informed him that she was unprolific. He answered my letter and again promised to make all right. In about a month or five weeks, I informed him again that she was worthless, for I had to keep up her swarm. Then he asked me not to destroy her, but keep her over the winter, and if she did not prove prolific in the spring, that he would replace her. (*Showing that he also knew that artificial queens were sometimes a year in maturing so as to partially keep up their swarm.*) In the spring I informed him that she was still worthless, and she gradually became more unprolific, and her queens more *non-egg-hatching*, until she died, in the beginning of July. He, I suppose, thought it would be smart or sharp to repudiate a voluntary bargain on his own part, and informed me that, as I had made such a fuss about the queen, he would not send me another. I think the queen averaged a little worse than any I have raised, that lived long enough to lay an egg.

In one of his articles Mr. Dadant says that I have given the probable cause of her unprolificness—the *chilling* she received in transit here. Of that I know nothing. I only gave the facts. But as he guaranteed her safe arrival, the chilling did not release him from the guarantee, or his promise to replace her, if not as guaranteed.

And right here let me say that I have never raised artificial queens in such small swarms as bee authors recommend, or bee breeders have heretofore (until this discussion commenced) used. For the last three years, when raising either natural or artificial queens, I have used only my largest and most vigorous stocks. As Novice says with a pint of bees he would take his chances with any one, Mr. D. quotes Novice's success. Novice, one year ago had, with artificial queens, been so successful that he had to send to Mr. Grimm (who is a strong defender of the natural queen theory, and I believe averages most of the time five hundred swarming hives), for twenty-five queens, to replace those that died of old age. Turn to Novice's articles and figure out, if you can, how, under any circumstances, he could have any queens over seventeen months old—except the thirteen he had left over after his heavy and unfortunate loss of bees. (He had thirteen queens at that time, provided none has died within those seventeen months.) I have six black natural queens now living that are four years and six months old.

Four years ago this subject was brought to my mind by articles in different papers, and my heavy loss of bees from the worthlessness of artificial queens. (Artificial swarming I have nothing to say against at present.) I have proved the truth of my position to my entire satisfaction, and am therefore RIVETED to the theory. What does Mr. Morbitzer say in the article in the October number of the Journal, translated from the German? He says it is advantageous to replace them with queen cells built for second swarms, instead of using post-constructed cells, FOR THE LATTER DO NOT PRODUCE AS VIGOROUS AND PERFECT QUEENS AS THE FORMER. So you see, Mr. Dadant, it is not only in America that OBSERVANT BEEKEEPERS have discovered the fact that ARTIFICIAL QUEENS ARE NOT AS GOOD AS NATURAL QUEENS; but in other countries also, thousands of miles away, with vast oceans between, and by persons speaking another language, has the *fact* that *artificial queens will not on the average be as large as long-lived, or as prolific as natural queens*, has been observed and published.

When reading the American Bee Journal, one day, on the subject of non-swarming, I noticed that the different correspondents advised the beekeeper to examine his swarms and destroy the queen cells weekly, as the only sure method to prevent swarming. After thinking the subject over, I concluded that that trait in the bees could be utilized to advantage, to procure natural queen cells ; and that, by taking advantage of it, natural queens could be had in sufficient number to Italianize an apiary in any one season. (Now the great and only justified point advanced by the artificial queen advocates is, that it is the only way to get cells and queens, from a selected queen, in sufficient number to Italianize or for sale.) And for that purpose it would be better to save them, and instead of trying to repress the swarming to endeavor to stimulate it. I have for two seasons done so, and have freely given the result of my experiments and my method of doing so, and even the novice who has read this discussion, can see and will remember

that the opponents of natural queens have not said, and cannot say, one word against it. They have only done their best to make beekeepers believe that an unnatural mode is as good as the way that the Creator of all has given to the insect to reproduce or propogate itself.

The result of my experiments with natural as against artificial queens is, that I prefer to raise and keep one natural queen with any two of the best artificial queens that I have as yet been able to raise; and I have raised artificial queens in as large colonies, as I have used for natural ones at same time of year. And if the artificial queen sent to me by Mr. Dadant is a good sample of what he can raise by artificial process, I would not give one natural for all that he has ever raised, all that he has at present, and all that he will raise in future—though he says in his article, believe my experience, and do so and so. If he has given me a specimen of his experience with the same truthfulness as he has given me a sample of fairness in his dealings, I want none of it.

JOHN M. PRICE.

Buffalo Falls, Iowa, Oct. 10, 1871.

[For the American Bee Journal.]

What Harm?

DEAR JOURNAL:—There seems to be a disposition on the part of some writers to frown down the custom of describing new hives and other devices in the columns of the Journal, which, if successful, would detract very much from the general interest and value of this periodical.

Bee-keeping is yet comparatively in its infancy; movable frames are just beginning to be adopted; the melextractor and other devices are practically on trial; and where one beekeeper adopts these, hundreds are still looking on and awaiting results. In consequence of this progressive state of bee-culture, numbers of thoughtful practical men are devising *real* or fancied improvements; and hence it becomes of paramount importance that the Journal's readers have descriptions of such improvements, that they may avail themselves of such as their judgment approves. The simple fact of this or that thing being patented, should not prejudice an impartial mind against it. It may be very valuable, or altogether worthless; but if the inventor did not believe his discovery to be a valuable one, he certainly would not incur the trouble and expense of securing letters patent, and the far greater trouble and expense of introducing it to the public. This, however, is of no sort of consequence to any person, save the one immediately interested, for no intelligent beekeeper will be imposed upon, while much that is valuable may be gained by reading descriptions of the vast number of patented and non-patented bee devices that are found worthy of adoption by our best apiarians.

It is quite probable that the time has gone by when any patented bee devices will really pay the patentee; therefore it would seem that few should feel encouraged to secure letters patent. Yet the facts prove the reverse to be true, and while such persons are disposed to incur the risk, others should not complain, for no one is obliged to purchase; and no one need be humbugged while *bee books*, and *bee journals*, and bee intelligence are everywhere available.

When such beekeepers as Quinby, Gallup, Hazen, Thomas, Alley, and many others, construct, *test*, and recommend hives, it is quite safe to place confidence in them; and when they kindly write a description for the Journal, let us not greet it with contemptuous allusions to that which is none of our business.

The fact that a perfect hive has not yet been invented—a fact that is clearly proven by the great variety in form of hives used by the best apiarians in the country, should deter all who have the true interest of beekeeping in view from discouraging the efforts of first-class men in this direction, but rather gladly welcome the largest freedom to all who furnish such descriptive articles. We therefore repeat our text—"*What harm*" can these articles do? May they not, on the contrary, possess positive value? We believe the latter to be the sentiment of nineteen out of twenty of the Journal's readers.

How much better for all concerned, if those writers who are unfortunately afflicted with an hereditary or acquired habit of fault-finding, would ventilate it by pointing out wherein hives are faulty, rather than indiscriminately pitch into every one who has the temerity to write of an improvement that has cost much study and experiment. We do not wish to be understood as being an endorser of patented or unpatented humbugs of any kind, for we well know that unscrupulous men have taken advantage of the general ignorance of beekeepers, and imposed upon them all sorts of worthless *bee traps*. But that time has passed—intelligence assumes the place of darkness, the underlying principles of bee economy are getting to be well understood; and therefore our voice is for improvements—especially when made by our leading apiarians. Let all such write freely for our excellent Journal, thereby enhancing its value and usefulness.

GEO. S. SELSBY.

Wintersport, Me., Oct. 4, 1871.

[For the American Bee Journal.]

Comments on Divers Topics.

MR. EDITOR:—It has been some time since I troubled you with an article for your valuable Journal; not because I have lost interest in the subject, but because I have been too busy to write, even to my friends and regular correspondents. Still, I have not failed to swallow everything new that I discovered in the Journal; though some of it I have to throw up again. For instance, the different plans of non-flying fertilization. Like Amateur, I have "grasped at every plan that had the least shadow of success, and some that had none;" but the result has been the same in every case—*a failure*. I

succeeded last evening, however, in actually forcing a queen to be fertilized, to all appearance successfully. I will report the result at some future time.

The subject of queen raising seems to figure quite conspicuously among breeders; yet hardly any two of them agree as to the best and easiest mode of securing hardy and prolific queens by forcing. Mr. John M. Price states that he has "been raising such (forced) queens for the last six years," and that three out of five have been lost on their wedding trip, while the remainder would be "non-prolific," or otherwise imperfect. Very persevering, indeed, must he be to follow up a practice for six years, that has given him nothing but imperfection. Now, I hold that it makes no difference whether our queens are started by bees under the swarming impulse or not, so long as they are fed for such by full stocks from the time the egg hatches, other circumstances being equal—that is, in regard to abundant forage or liberal feeding.

On page 12 of the current volume, Mr. J. L. McLean states the reason why forced queens are often less hardy and less prolific than those raised by colonies under the swarming impulse; and gives a very good and successful plan to secure them started from the egg, or of securing to the young queen at least fourteen days in which to mature. I practice a plan somewhat similar, but my method secures to them one day more at least. I proceed as follows: first, I deprive a vigorous colony of their queen, and leave them queenless at least six days. On the evening of the sixth day, I insert an empty worker comb in the centre of the hive containing my queen mother, placing the comb on which I find the queen by the side of the empty one, with the queen between them. She will seldom fail to fill the empty comb pretty thoroughly with eggs by the next morning. On the morning of the seventh day, I take out all the combs from my queenless hive, and destroy every queen cell the bees have started. I now insert the comb containing the eggs from my selected queen, in the centre of my queenless hive, and as the bees therein have no other brood from which they can raise queens, they are obliged to start them from these eggs. This plan has a decided advantage over that given by Mr. McLean, in that the bees having been queenless for some time, will at once start a large number of queen cells, and are not likely to delay and start others two or three days later, as they are apt to do when just deprived of their queen. To make this still more secure, I examine the hive about noon of the third day, and make a note of the cells that have then been started. I examine again a day or two later, and if I find any new cells started I destroy them; but it is very seldom that they start any after the third day, and they seldom do much towards constructing the queen cell till the egg hatches.

About the same results may be obtained by giving to a full colony, thus queenless and broodless, a comb containing brood without regard to the age of the brood; but it is essential that the comb contain eggs or larvæ just hatched. Then, by examining each day, and making a note of or marking the cells that are started each day, and destroying all that are capped over in less than five days from the time they were started, you will secure full five days for the feeding of the queen larvæ—which is all they can receive under any circumstances, as they remain sealed eight days, and are three days in the egg, in which period of course they receive no food.

I am sorry my friend Gallup gets pitched into so hard from every quarter. I was at his place this summer, and really think he has got something nice in the way of a bee hive, if it is properly managed. But here let me make a suggestion, accompanied by figures, for the benefit of those who are urging their queens to more than ordinary labor. It will be admitted by all who have been observing, that, under ordinary circumstances, a queen bee is capable of laying on an average, about two thousand (2000) eggs daily. This she will continue to do for, say, five months in the year, or a total of three hundred thousand (300,000) eggs per year. The average life of a queen will not exceed three or four years, say three years; in which time she will have deposited nine hundred thousand (900,000) eggs. All these, or nearly all, have to be fertilized from the contents of the spermatheca of the queen. Now if we urge our queens to double the amount of labor (which we can easily do), will we not have to renew them proportionally so much oftener, or every eighteen months?

Before I close I must suggest an improvement in one kind of beehive, for the benefit of those who are using it, and that is the Buckeye. I never yet have seen one of the original form that was even manageable—say nothing of being convenient. The change I would suggest is this: First, tear off the moth nursery, and burn it, to destroy all the eggs and larvæ of the moth; then turn the hive down on its back, and nail up the ends; nail strips on the inside upper edges of the sides, to form rabbets for frames; cut the frames down to the bottom of the surplus sections, and nail thin strips on, projecting at ends, to hang on rabbets; put on loose honey-board for surplus boxes, or an open box for surplus frames; a cover, to keep surplus chambers dark; and cut a hole at bottom of one side, for a fly hole. One man made this change in a lot of these hives, and could then manage them very well; would prefer new lumber, however. Of course, after making this change, it would be covered by the Langstroth patent.

So far, this has been a splendid honey season in this locality. I think I shall be able to give a report, this fall, that will be satisfactory to all, and I am sure it will be satisfactory to your humble servant and well wisher.

J. E. BENJAMIN.

Rockford, Iowa, Aug. 10, 1871.

MR. ROBERT JOHNSON, of Kossuth, Des Moines county, Iowa, reports that he has colonies of bees that gave him one hundred and fifty pounds of honey each, during the past year.

[For the American Bee Journal.]

Transferring Bees.

I have transferred bees at almost all seasons, but have not usually been pleased with the results when done later than the first of July. I much prefer to transfer in April or May, making two swarms of one, if the strength of the colony will permit—thus we have artificial swarming and transferring combined. But the object of this writing is to give my method of securing the combs in the frames. I used to use wooden or wire clamps, and at first wax, but finally adopted the following plan, which may not be new to many, but it was new to me, and also original; and has given the very best satisfaction, being neat and convenient, and doing away with the necessity of several after jobs, such as removing clamps, &c., which follow most methods.

I simply prepare my frame with a triangular comb guide on the top, as I would for the bees to build on, also nail in a bottom, and if the frame be a deep one, or the comb new and tender, I put in a middle support with comb-guide on the under side, just like the top bar. I now cut a piece of comb just long enough to go from the top of the frame to the middle support, or to the bottom, as the case may be. I then cut along the centre of the top of the comb, and into this cut bed the comb-guide in the top of the frame, and bring the sides down around the guide so that it may fit closely. Now bring the frame to an upright position, by lifting the transferring board with it to support the comb until up, when it will stand any reasonable amount of shaking, without falling out.

Levant, Maine. G. W. P. JERRARD.

[For the American Bee Journal.]

Honey Resources from Strange Quarters.

BY REV. E. L. BRIGGS, *Ottumwa, Iowa.*

DEAR JOURNAL :—As anything strange or new in the line of bee-culture always attracts my attention, and wakes up my one ideaism on this subject wonderfully, I write to say that a discovery which I made last week raised this propensity almost to fever-heat. While visiting about five miles in the country, my host showed me his five colonies of bees, with a manifestation of pride and interest somewhat unusual. "This Langstroth hive," he said, "has filled six boxes once, and about eight days ago, I put on another set of boxes, and five of them are full again." There they were, sure enough ! White, clear, beautiful, all full to the last cell. "Pretty well, for black bees !" was my mental exclamation ; and with something like a sigh, I thought of my large, beautiful, yellow Italians, which had not done as well as that.

But the secret came out while walking over his farm, about an hour afterward. "There," said he, "are a couple of Jack oak trees, around which the bees fairly swarm every morning and evening ; and I can't see what they can get off a Jack oak."

Turning our steps to the trees indicated, I saw the bees at work as he had said. This variety of oak is forming its germs or bloom, if it can be called such, for its next year's crop of acorns. These have already the shape of the cup or husk in which the ripe acorn is embedded before it falls out. In this cup the pistillate portion is formed, from which honey is constantly oozing, and if not disturbed forms large drops, which fall upon the leaves below. I picked off several leaves on which it had fallen, and from which, in turn, it dripped off upon others, where it stood in large quantities. No wonder the little pets were revelling in flowery nectar in rich abundance !

But I was to meet another wonder, "You see that little oak tree down in the field ? Well, the bees have been swarming around that all summer, and I have seen them gathering something off the ground, where it stood in a pool." Of course, I went to that tree. "There," said he, pointing to some dark patches on the ground, "is where the bees work every morning." Casting my eye up the body of the tree, I saw it was wet with some substance, drops of which were suspended from points on the rough bark.

The woodpecker's had picked hundreds of small holes in the bark, from about the size of a small lead pencil to the size of a lady's thimble. And from under the bark was flowing out a substance of about the consistency of honey, perfectly transparent, and differing in no way from common honey except that I thought I could detect in this a slight oaky taste ; while that from the Jack oak bloom was as free from any disagreeable taste as pure white clover honey. This tree was of the variety called Spanish oak by the people here.

Here were two sources of honey from which the bees could gather any amount that they could find room to store. Mr. Novice, we will believe anything that you can write concerning the amount of honey a colony can gather, provided you ply your honey extractor diligently. Yes, we will believe Mrs. Tupper's seventy-two four pound boxes from one colony report ; provided she will inform us that there are plenty of Spanish oaks and corps of woodpeckers to work them, and a forest of Jack oak in bloom near her apiary.

Bees have generally filled all the surplus room they had this year, in Southern Iowa.

The melextractor is certainly an invention in the right direction. Intelligent bee-culture is a resource of pleasure and profit but little understood as yet, by most of us. The multitudes, too, engaged in promoting it are benefactors of the race, who have sent and are sending bread to the hungry, and "butter and honey" also. Let the workmen be multiplied to gather the sweets, and may all eat of the good of the land.

My beautiful Italians still maintain their good character. The three light colonies which I brought here from Mount Pleasant apiary, are now a snug family of twelve—all heavy and strong in numbers.

I have been experimenting with a hive of my own construction, in which I think I have found the secret of inducing bees to build in surplus boxes and frames at once. So far it has met all my expectations, and I grant those expectations were high. The public will have the benefit of this hive shortly. Sept. 12, 1871.

[For the American Bee Journal.]

Still they Come!

MORE QUESTIONS FOR "NOVICE."

DEAR NOVICE:—Will you please answer the following questions through the Journal.

What method of artificial swarming did you adopt in 1869, when you increased eleven stocks to forty-six?

How do you shade your stocks in summer from the rays of the sun?

Do you paint your hives? And if so, what color, and how do you mix the paint?

Does the Peabody extractor work as well as you expected?

Are the queens you purchased from Mr. Grimm last fall as good as the queens you raised from the original one you purchased of Mr. Langstroth?

Some of the above inquiries may have been answered by some of your articles in the Journal; but if answered again in full you will greatly oblige many readers of the Journal, as well as a young BEGINNER.

[For the American Bee Journal.]

Linden and Buckwheat.

I agree entirely with NOVICE as to the value of the linden tree as a honey producing plant, and before perusing his article in the August number of the Journal, I had devised a plan to secure the planting of linden trees around my farm.

I have resolved to sow linden seeds and plant linden sprouts, in order to start on an acre of ground a nursery of linden trees. These lindens will be planted in rows four feet apart, and twelve or fourteen inches in the row, making ten or eleven thousand to the acre, and will be cultivated the same as an acre of corn.

As soon as some of the young trees will be strong enough to resist cattle, I will offer them *for nothing* to the farmers owning land adjoining my tract, to be planted as avenue trees around these farms. Every section of land has four sides, three hundred and twenty rods in length, and with trees planted on the boundaries, two rods apart, there will be six hundred and forty trees to each section. My section, and the eight around, nine in all, will furnish room for 5,760 trees—none of which will be any further than one and a half miles from my apiary. These trees will begin to yield honey in less than from ten to fifteen years, and for ages the harvest will go on *crescendo*, for the linden is a very long-lived tree.*

Besides, all my neighboring farms will have a better appearance than the naked prairie presents, and travellers will, in summer, be grateful to him who has kindly prepared so umbrageous a road. In France, nearly all the trees in the avenues and squares in and around the cities are lindens. In my former home, the city of Langres, some thousand of lindens, five or six hundred years old, were the delight of the inhabitants. But, alas! in consequence of the war, nearly all of them have been cut down, and the poor bees—innocent victims of human folly—will starve amid the devastation.

Do you not think, Mr. Editor, that it would be well for the Beekeepers' Conventions to petition the Legislatures for an act requiring every roadside to be planted with linden trees? Such a measure, aside from the delightful shade it would provide, would add millions of dollars every year to the wealth of the nation.

When I first came here, all the farmers around me were persuaded that buckwheat was an injurious crop, and of course none was raised. Yet, as I wanted some for my bees, I sowed one or two acres and got some bushels of seed. Next year I offered portions of that seed to all my neighbors gratuitously. Three or four of them accepted it, and I have made the same offer every year since—always with some success. The result is that now there are more than twenty acres of buckwheat around my apiary, although I have this year given away only five or six bushels of seed. I got this result at a very trifling cost, for half a bushel of seed is enough for an acre.

As there are here also, in the woods and meadows, plenty of Spanish needles, golden rods, and asters, to intervene with and follow the buckwheat, and as the Italian bees do not work on buckwheat when they can find anything better, my summer crop is nearly as good as my spring honey, and I sell it yearly without difference of price. CH. DADANT.

Hamilton, Ills., Aug. 10, 1871.

[For the American Bee Journal.]

Bee-culture in College.

MR. EDITOR:—In a recent lecture Mr. Quinby said—"It is time that all our agricultural colleges had a professor of apiarian science." I would state that we have in College a class of twenty-five who get the theory and practice of bee-keeping this term.

All who take any course, get not only the science of bee-culture, but have practice in all the operations of the apiary. The students handle the bees with as much ease as veterans, and take great interest in the Hruschka, the queen nursery, and all the various experiments.

Last year we had black bees which were very cross. Many of the students were afraid of them, and with excellent reason. Now we have none but Italians, which are very gentle, so that over one hundred and forty students go in and out among them with entire freedom.

We noticed early in the season that the Italians worked largely on the red clover.

Agricultural College, A. J. COOK.
Lansing, Mich., July 21, 1871.

* We have doubt whether the honey crop from the *European* linden is certain yearly, or whether the tree furnishes a permanent resource, except in soils and a climate peculiarly adapted to its growth. In the Capitol grounds and in the public avenues of Washington, we have known this species to fail in yielding honey twice in seven years, and some of the trees die annually, apparently in consequence of the drouth usually prevalent here after July 1st. The *American* linden blooms later, yields honey in seasons when the other fails to do so, and appears to be a hardier tree, in *this* vicinity.—[ED.

THE AMERICAN BEE JOURNAL.

Washington, November, 1871.

☞ We occasionally receive complaints from subscribers that the Journal fails to reach them, or does not come to them as early as it does to other subscribers at the same or neighboring post offices. We can only say that we do not think the fault lies with us. We are as careful as we well can be in addressing and mailing the Journal, and are ever anxious that it should reach its readers promptly. That it should reach all by due course of mail is certain, as with a single exception since the publication commenced, all the papers have, in each successive month, been placed in the post office here on the same day and at the same hour, and we are assured that they are regularly despatched by the first following mail. So far as is in our power we are always willing to supply missing numbers when informed of failure.

☞ For quickly furnishing a colony with the requisite supply of honey or sugar syrup, we think the large size BEEBE FEEDER is very convenient and serviceable; though if the main body were made of glass it would, in many respects, be an improvement.

THE following letter from our friend and correspondent, Mr. Gravenhorst, reached us after unusual delay. The discovery of fossil honey combs is an interesting fact, particularly at this time, when the twice exploded "development theory" is again pressed on the attention and acceptance of inquirers. Whatever seeming evidence in behalf of that theory may be drawn from other sources, it is very certain that the natural history and physiology of the honey bee furnish nothing of the kind; but quite the reverse. Apart from this, however, the fossil honey combs now found show conclusively that bees were wax-secreting, comb building, honey gathering, and honey-storing bees—just such as they now are, as far back in the distant bygone ages as human investigation can probably reach. We need not trouble ourselves about the precise period at which the process of fossilization commenced. We shall leave it to Lyall and the geologists to settle, according to their principles, the date of the stratum in which those fossil combs were found; and then taking the changes effected in the bee in the intervening period till now, to—0, as the facts prove, we shall, let Darwin and the transmutationists take up the "wondrous tale," and figuring out on those data the problem of supposed pre-existent changes and metamorphoses, tell us how much of the antecedent eternity was requisite to develop the fancied primordial germ of incipient existence into a perfect bee, such as we find it to have been already at so remote an era of the backward abysm of time when petrifaction began:

BRAUNSCHWEIG, GERMANY, *August* 24, 1871.

The August number of the Bee Journal interested me highly, in several respects. The article from Prof. Menzel, on "*The Age of the Honey Bee*," I read with much gratification, especially as I am in a position to make it somewhat more complete. Menzel says: "The only specimen of the honey bee, in a fossil state, hitherto found, occurs in the insect-bearing stratum of the quarries of Œningen." (See Bee Journal, Vol. VII., No. 2, August 1871.) When Menzel wrote this he was of course not aware that other and stronger evidence of the existence of the bee—the *Apis mellifica*—in the antediluvian period, is now at hand. Quite recently, when visiting the Archducal Museum of Natural Science here, I found therein three specimens of petrified honey combs discovered when a large bone—three feet long and a foot thick, evidently part of the skeleton of a mammoth—was exhumed, in the vicinity of Braunschweig. These fossil combs have cells of precisely the same diameter and depth as those now built by our common or German bee, and are as attractive and beautiful in appearance as though newly constructed. Chance led me to the discovery, and Prof. Menzel will doubtless be greatly delighted, when I communicate the fact to him. I will shortly send to the Bienenzeitung a more full account of this interesting discovery, and shall be pleased if you will insert the article in the Bee Journal.

As regards the essay in the July number of the Journal, "*On the Introduction of Young Queens to Colonies that are Queenless*," I must say that the Rev. Mr. Langstroth has herein again very correctly observed and experimented. My experiences coincide altogether with his; and the process, properly applied, is of great value in bee-culture.

Our honey prospects have improved greatly since the beginning of July. On the 5th of that month I fed my bees for the last time. Then a change in the weather took place, and forage became abundant. From the 7th of the month till now, with occasional brief intermissions, honey flowed plentifully. Chief of all, the heath district now warrants high expectations. On the 9th of this month I removed thither, though twenty miles distant, nearly one hundred of my stocks; and thus, if God please, we may perhaps still be able, at the close of the season, to speak of a good honey year.

C. J. H. GRAVENHORST.

☞ We have repeatedly advised beekeepers to disregard Kidder's claims to *royalty* for the use of the triangular comb guides, yet still inquiries come respecting the legality, or *illegality* rather, of his or his agents' demands. We can only restate the fact that he has no valid patent, and no right to make any claim.

On this subject we find the following remarks, by the editor, in the "*Western Farmer*," published at Madison, Wisconsin, where the fraudulently procured decision, on which Kidder and his agents rely, was obtained.

"Mr. Kidder owns a patent issued to Mr. Clark, which he claims covers a device used in the Langstroth Hive. Mr. Langstroth claims that this patent is invalid, and also that it does not, even if valid, affect the device used in his hive. In the United States Circuit Court, at Madison, Wis., in January,

might add in extenuation of this blunder, that the 1870, a decision in Mr. Kidder's favor was obtained in a trial against a Mr. Trask, who was using the Langstroth Hive. We stated at the time, and now repeat; that the case was not fully tried; that the defendant was in collusion with the plaintiff; that there was, practically, no defence; and that this decision should not have the slightest weight with any one. Mr. Langstroth and his agents have publicly guaranteed to save all users of their hive from any loss in consequence of any decision of the courts against them. We understand that they will consider it a favor if Mr. Kidder will commence a prosecution against any one—if they are informed of the fact. We have heard of many threats of prosecution by him and his agents, but no case, except the one referred to above, where such prosecution has been carried to a trial. We do not know whether the Clark patent is valid or not. We do not know whether persons using the Langstroth Hive should pay Mr. Kidder or not. But we do know that the decision relied on by them, as a means of frightening people into making such payments, proves nothing, and should not be regarded. The experience of the past seems to show, also, that the man who refused to make any payment when demanded is not further troubled—at least not by prosecution."

A Test of the Dzierzon Theory.

The Baron of Berlepsch, in the late revised edition of his work on "*Bees and Bee-culture*," speaks of the evidence of the correctness of the Dzierzon Theory as to the production of drones, as follows:

"If the male or drone egg does not require impregnation, all Italian queen bees, of pure race, must certainly produce pure Italian males or drones; and all queen bees of the common or black race, must as constantly produce black males or drones—even though such queen bees were fertilized by males or drones of the opposite race. And such, too, is found to be the fact. I will not, however, refer to the Italian queen bees for proof of this, because here we may easily be deceived, by regarding as a pure Italian, one in which there is, from birth already an admixture of black blood. But the pure black or common queen bees, fertilized by an Italian drone always furnish unmistakable and conclusive evidence of the truth of this statement. Of more than thirty such queens which I have had opportunity to observe, there was not among all the *drones* produced by them, a single one to be found that bore any resemblance to an Italian drone. All of them were obviously of the pure black or common race; whilst the *workers* proceeding from the eggs of those queens showed diversities of marking and coloring. To which of the races a drone belongs is distinctly shown by the central or lower side of his abdomen. If that be *yellowish* in color, the drone is either a pure Italian or a hybrid; if it be *whitish*, he is a pure black or common. The dorsal or upper side of the abdomen is deceptive, as some pure common drones show brownish rings."

Cure for Bee Sting.

On this topic, of such poignant interest to many, whether beekeepers or not, Mr. S. Way, of Batavia, Ills., writes to us, as follows:

To cure a bee sting, let the patient drink half a tumbler of whisky as soon as stung. This will keep the poison from going to the lungs. A wet sheet or pack is good after the whisky. I have used this and the pack for years in my family with perfect success.

We fear that if this remedy be popularly accepted as a specific, some inveterate topers might find it agreeable to get into a habit of being stung.

We have the following remedy also from Mr. F. J. Dougall, of Stouffsville, Canada.

"I find the best thing for the sting of a bee is alcohol. Bathe the part stung with it immediately. It will kill the pain and stop the swelling. It has proved itself to be the best thing I ever tried. It was by accident I found it would give relief."

Another correspondent recommends the immediate application of pure spirits of turpentine.

CORRESPONDENCE OF THE BEE JOURNAL.

CHARLESTON, ILLS., Sept. 14, 1871.—We have to report again another very unfavorable season for bee-keeping in this locality. Since the 1st of July the drouth has prevailed to such an extent that few colonies have stored any surplus honey, and many will require feeding to carry them through the winter. Thus we have had two poor seasons together for bee-culture, in this section of country, and this will, of course, discourage many in the pursuit of bee-keeping.—J. DAVIS.

HENDERSON, ILLS., Sept. 15.—Bees are doing very well here this season. They are storing honey so fast that there will not be room to keep up enough brood, and we will have few bees, per hive, to pass the winter.—A. MCDILL.

CEDAR CREEK, N. J., Sept. 15.—I think it has been too wet in this vicinity for bees to do very well. Towards the last of July my bees were almost destitute of honey, and commenced to drag out the young. I fed them with candy, which seemed to put a stop to it. They have been busy at buckwheat lately, which is their only hope, except feeding.—E. KIMPTON.

CINCINNATI, OHIO, Sept. 22.—The honey season has been very poor in this vicinity, on account of late frosts last spring, and the white clover being burnt out by the drouth last season; still our bees have given us a net income of fully one hundred per cent. on the investment this season. The white clover is unusually luxuriant at this time, giving a fine prospect for honey next season.—M. NEVINS.

LYNCHBURG, OHIO, Sept. 22.—My stock of bees is small—only nineteen colonies, all in the Langstroth hives; but have not made honey enough to pay for the Journal. Bees in this section have not done anything.—J. STEVENS.

EXCELSIOR, MINN., Sept. 25.—Enclosed find two dollars for current volume of the Journal—should have sent it sooner, but waited until I went to the city, where I could obtain a money order; and waited also to include report for the season.

You may as well consider me a life subscriber, as the Journal is simply *indispensable*; a single number frequently being worth more than the Journal ever cost me.

This has been a good season for bees; better than usual. The linden season was very fine. All our surplus honey is linden honey, and I never saw any finer. I do not think anything in the honey line can surpass it—combs white as snow, and extracted honey the color of the clearest, finest amber. But there has only been a slight secretion of honey since the linden season. I rather overdid the extracting business during the linden season, retarding brood production, and giving the bees a backset generally. I

linden season ended very abruptly, as the result of a great hail-storm and sudden change of temperature, occurring three or four days sooner than I expected the season to close. I had to break up one stock, and feed 120 pounds of honey to thirty-seven others. This result suggests that some experience and prudence are requisite in this business, as well as in bee management in general.—J. W. MURRAY.

RED OAK JUNCTION, IOWA, Sept. 27.—You may count on me as a regular subscriber, as long as bees continue to gather honey and I live. I bought two stocks of Italians last May. Within a week one stock disappeared, leaving the hive empty. I commenced feeding the remaining stock, and when they improved I divided them. I now have six strong stocks in Champion hives. They are full of honey and I have taken enough to last my family all winter. I bought five acres of ground adjoining the corporation limits of Red Oak. I intend to set it out in fruit trees, and stock it with a hundred or more stocks of bees, to give me employment outside of the confinement of the store. How many can one man take care of?—E. D. GREGORY.

AUBURN, N. Y., Oct. 3.—This season is my first at bee-keeping. Commencing with two Italian and nine native colonies, the latter in box hives, which I transferred to Langstroth hives. May 18th, they filled four frames in the Langstroth hives. Five swarms were obtained artificially, and six by natural swarming. My old stocks had six frames to fill before surplus was stored. Now for the results, which are minutely correct, except that no time is charged to their account, for personal services.

385 lbs. box honey at 30 cts. per lb.....	$115 50
100 lbs. unfinished boxes, at 25 cts.....	25 00
36 lbs. saved when transferring, 20 cts.....	7 20
14 lbs. wax, 28 cts.....	3 92
11 new swarms, 4 Italians and 7 natives....	100 00
	$251 62

CONTRA.

2 Italian colonies bought.....	$20 00
9 native colonies bought.....	45 00
20 Langstroth hives, $3.....	60 00
Right to use the same.....	10 00
	$135 00
Credit for net profit.....	$116 62

This may not be as good a showing as many veterans in the business are able to give, but it is eminently satisfactory to a tyro in bee-culture, and fires my ambition to make greater efforts in the future as the study of the little beauties is a constant source of pleasure to me.—CHAS. D. HIBBARD.

HOME, MINN., Oct. 9.—Set me down as a subscriber for—I was going to say ever—as long as I live. I am but a beginner, having started, a year ago, with thirteen stocks; increased them last year to thirty-five, and obtained nine hundred (900) pounds of surplus honey, without the extractor. This season I increased them to seventy-five stocks, and got thirty-eight hundred (3800) pounds of surplus honey, with the extractor. I owe a large part of my success to the Journal.—F. H. HARKINS.

FRANKLINTON, N. Y., Oct. 9.—This has not been a very good season for bees in this section. Only about two weeks of buckwheat bloom is all that my bees worked on, in boxes, to amount to anything. I shall get some 1800 pounds of honey. I am building a bee cellar, house, and shop all together. I shall winter eighty or ninety colonies, and shall always take the Journal while I keep bees.—B. FRANKLIN.

GNADENHUETTEN, OHIO, Oct. 9.—We have had a good season for honey in this neighborhood, but from some cause the bees did not swarm. We made an attempt to extract honey with a honey extractor, and got along very well with it; but did not find ready sale among the people for the honey. They all prefer the box honey, even at a higher price.—S. LUETHI.

GALESBURG, MICH., Oct. 9.—Bees did well here in in the fore part of the season. The latter part was rather dry, but I managed to have all my stocks strong. I have now thirty colonies in movable comb hives, and they average forty pounds to the hive. I have taken six hundred (600) pounds of surplus honey this season.—H. B. CLARK.

CINCINNATI, OHIO, Oct. 9.—The honey season has long since closed, with very poor results; so far as surplus honey is concerned, in this section of country. Had the beekeepers used the melextractor earlier in the season, the result would have been quite different. But we waited for box honey, and got none. The hives are brim full of honey, too much for the safe wintering of stocks. My stocks at my home apiary, are full to the bottom; I shall empty out some of the centre combs.—A. GRAY.

[For the American Bee Journal.]

Non-Hatching Eggs.

MR. EDITOR:—In the last number of the Journal I find a communication from G. W. P. Jerrard, of Levant, Me., in regard to non-hatching eggs of the queen bee. I have had a similar case. As Mr. Jerrard wishes to know if this is common, I can answer for myself only. In August last I gave a young Italian queen to a stock of black bees. She commenced to lay shortly after, but rather sparingly; and I soon discovered that, from some cause, her eggs were not hatching. Supposing that the workers had objections to her (as I had a queen just destroyed by the same stock), I commenced to stimulate them, by feeding, until the queen was laying profusely; without, however, producing any better result. She even deposited four and five eggs in the same cell at last, for want of room.

The queen was nice, large, and lively; and of course I was disappointed in her. I further took some of her eggs and introduced them in another colony; but they would not hatch there. Eggs from another colony, which I introduced in her hive, readily hatched—the workers starting queen cells immediately from them, seeming to have a true knowledge of the situation.

Dr. Hamlin's queen refused to lay—otherwise perhaps her eggs would have hatched.

Any information or suggestions throwing light on this subject, will be gladly received.

EDGAR MCNITT.

Centre Village, Ohio, Oct. 7, 1871.

I don kno ov enny bissiness on the breast of the earth that will make a man so lazy and useless, without actual killing him, az hunting wild bees in the wilderness.—*J. Billings.*

[For the American Bee Journal.]

Improved Bee Hives.

The object of improving bee hives is, or ought to be, to combine simplicity and cheapness of construction with facility in the management of the bees; and the hive which does this to the greatest degree, is the best hive. A hive which costs five dollars, is too expensive for the majority of beekeepers: it takes too much of the profits. And one which costs but a single dollar, if so made that it is not easily manipulated, or if it be not conducive to the storing of surplus honey, or not effective in the rapid building up of colonies, is too cheap for any beekeeper. As all who keep bees for profit, need to rear some queens for their own use, their hives should be so constructed as to be convenient for that purpose; and they should be so made as to conform to the instincts and needs of the bees in storing and consuming their winter's food.

With these necessary adaptations in view, let us reason as *how* to make a good hive. It is presumed at the start, of course, that the hive shall have movable comb-frames, as they are indispensable to success.

First, then, as to *capacity*. It is believed by the most successful apiarians that a capacity of about two thousand cubic inches is sufficient for the needs of a strong colony, both for breeding purposes and for storing the winter supplies. But small colonies, as second and third swarms, do not, at the start, need so much room, and will build combs more rapidly in a space adapted to their size. Hence, means for regulating the capacity of the hive should be provided; and for this purpose nothing is better than a close-fitting division board. To use a division board successfully, the hive must be *narrow* one way, with the frame running the narrow way, and the entrance at the end of the hive, or side of the frames. The swarm or colony may then have four, six, eight, or ten frames, as it needs. The hive must also be *tall*, to secure the storing of winter supplies in the proper place, viz., *above* the brood and the cluster. In the common form of the Langstroth hive, the division board cannot be used successfully, neither can the bees store their winter supplies where needed.

We can readily see, then, that to combine the proper capacity for the main hive with the necessary shape — narrowness and tallness — we shall have a hive with dimensions somewhat as follows: say, twelve inches from side to side, fifteen inches tall, and fifteen inches from front to rear. This will give abundant space for brood and winter store.

But the principal object in keeping bees, is to secure surplus honey, and provision must be made for this.

Those who wish to obtain their surplus stores in boxes, may place them on the sides of a hive of the dimensions indicated above. Such a hive will accommodate boxes to the aggregate capacity of one hundred pounds or more. An outside casing may cover the whole.

But, to secure the largest quantity of honey, we must use the Extractor; or, if not, we may obtain it in frames suspended in the rear of the main hive, much more readily and rapidly than by the use of boxes; and in either case, whether we use the Extractor, or take the honey in the comb, by frames, we need only to lengthen the hive, so as to hold two or three more frames than are needed for winter purposes.

With a hive thus constructed, we shall need no *cap* other than a plain board, with cleats on the under side to prevent warping or being misplaced. Neither shall we need a honey-board, which is an expensive and troublesome arrangement. Of course, then, we need no air space above the frames, and no rabbets to hang them on—simply hanging them on the edges of the box which composes the hive, making the tops of the frames close-fitting to each other throughout their whole extent.

As to a bottom, we need only a plain board, detached, with strong cleats on the under side.

The writer of this has used the Langstroth hive many years, also the American and other patents, and has constantly studied to improve them. The result thus far is, that he has a hive that can be made here for two dollars, which, as he thinks, has many advantages over a host of patents, with few disadvantages, and no unnecessary fixings. It can be adapted to the needs of a large or a small colony; will hold and winter two strong colonies at the same time; or can be used for three or four good queen-raising colonies.

The inside dimensions of this hive are: twelve and three-fourths inches from side to side, nineteen and one-fourth inches from front to rear, and fifteen and three-fourths inches deep. It contains thirteen frames and a division board. Entrances at each end; top of frames closed; cross-bars through the middle; top and bottom detached.

This hive is not patented, and the only feature in which it resembles the Langstroth hive is in having movable frames. If any of the readers of this desire to try the hive, and cannot make one from the description, I will cheerfully give full directions; but all correspondents must enclose stamps or money sufficient to pay me for my time, stationery and postage.

W. C. Condit.

Maryville, East Tennessee.

Bees and Honey.—Great and increasing attention to bees and the production of honey, is one of the "signs of the times" at the North and West, but *our* people do not seem to have awakened yet to the importance of the subject. The cash value of the honey made in the United States, every year, amounts to several millions of dollars, and the cost of producing it is a mere trifle. If the people of the South and Southwest would devote a little time and attention to this matter, they would be agreeably surprised at the great results from light labor and care. With the Italian bees, new and improved hives, &c., the business is reduced to perfect simplicity, and the profits are unfailing and sure. We earnestly advise our readers to give bee-keeping a reasonable and proper share of attention at once. — *New Orleans Home Journal.*

Nov. 1871

[For the American Bee Journal.]

North American Beekeepers' Association.

Notice is hereby given that Temperance Hall, Cleveland, Ohio, has been engaged for the sessions of the *second annual meeting* of the NORTH AMERICAN BEEKEEPERS' ASSOCIATION, during *Wednesday, Thursday and Friday, December 6th, 7th and 8th.* This hall is in the central part of the city, and is large enough to seat all the delegates that may desire to attend. Measures are being taken to secure *reduced rates* on the leading railways for the members of the association, and all others who may wish to join. Shall be able to say more on this subject in the next issue of the Journal.

M. M. BALDRIDGE,
Secretary.

St. Charles, Ills., Oct. 10, 1871.

[For the American Bee Journal.]

Tennessee Beekeepers.

The Tennessee Apiarian Society held its regular monthly meeting at the rooms of the Agricultural and Mechanics' Association, in Nashville, Tenn., September 9th.

The President's annual address was read. It exhibited great advancement in scientific beekeeping, and a large increase in the use of movable comb hives and the introduction of Italian bees. It also gave some very interesting statistics, showing that a very rich field was open for the development of the honey resources of the State.

The following officers were elected for the ensuing year:

President, Dr. T. B. Hamlin; *Vice President*, Dr. P. W. Davis; Secretary and Treasurer, S. S. Hall; Corresponding Secretary, W. E. Ladd.

All communications addressed to the President or Corresponding Secretary at Edgefield Junction, Davidson county, Tenn., will receive prompt attention.

Are Italian Bees Robbers?

The following article, from the *Medina (O.) Gazette*, has been on our files some time; but, refuting, as it does, charges frequently brought against the Italian bees by persons not familiar with them and their habits, cannot be regarded as *out of season*, even now.

MR. EDITOR:—We have been somewhat astonished to hear, of late, a tendency to lay to the door of the gentle Italians all the blame of hives being robbed, honey boxes emptied, etc., etc., while it is now a well established fact that Italian bees are *far less* disposed to get their stores dishonestly, than the common black bees. Without making any argument, we will simply ask any one who has a hive of bees at this season, to go and observe them for a few minutes. A few bees will be seen at utmost any time of day, cautiously approaching the hive and then dodging back suddenly, as the inmates discover their presence and "go for them."

These of course are robbers, and in nine cases out of ten will be found to be bees perfectly black, even in the vicinity of our apiary, notwithstanding our Italians being largely in excess of all black bees kept in the neighborhood.

Again our Italians have been working for a month past, on a tall white flower growing in the woods south of here a mile or two, gathering enough honey so that we have taken from their hives over 200 lbs., which we have labelled Autumn Wild Flowers, and while they were thus industriously at work, common bees were doing nothing unless it was to try and rob their yellow neighbors. In fact so bad did the common bees become that we were oblidged to remove the honey from our hives by *moonlight*, for as soon as a hive was opened in the day time, the common bees poured in by dozens, and then followed us to the next hive, so that in some cases a teacupful were stung to death and carried out. *Not one of these were Italians.*

We stopped operating in the day time as we did not want to have our neighbor's bees killed. The person who claims to have suffered most by the Italians, left two large boxes of honey on a table in his orchard a great part of one day to let the bees get out, as he expresed it, and in the afternoon came to tell us the Italians were robbing him. We went down and took care of his honey for him and showed him his mistake. There was robbing indeed by all the bees in the vicinity, and a few Italians among the rest, which he could distinguish from his own, the other black bees he could not, yet we had told him only a few days before, to be very careful in removing his honey boxes during a time of scarcity, and had earnestly urged him to take the American Bee Journal, to learn how to take care of his bees. Since then we learn he is denouncing the Italians in the strongest terms, as more of his hives have been robbed by somebody's bees, which we cannot wonder at if he manages as he did with his honey.

When we commenced keeping bees here, old beekeepers told us that they did not pay any any more, the moths and robbers and bad seasons were such that it was all loss and no profit.

Is it anything strange that bees yet sometimes get robbed or played out? and if they do, must it all be laid to the Italians?

Before closing we may remark that we have neither hives, queens nor bees for sale, but write this simply because we cannot bear to have the Italians blamed when they are not guilty.

Many other parties are now keeping the Italians in Medina county, who we feel sure will fully endorse all we have said, as will, in fact, all scientific beekeepers in the United States.

We would like to give our system of bee keeping fully to the readers of the *Gazette* if it possesses sufficient interest.

A. I. ROOT.

[From the Prairie Farmer.]

Alsike Clover.

In your last issue you inquire for experience with the Alsike clover. The commendations of the Washington Agricultural reports, the Shakers, and others, induced me to sow six acres of it on our common dry rolling prairie soil, in this county, about the middle of last May.

I sowed from three to four pounds to the acre, with the usual amount of Timothy seed. It came up very thick, though the drought in the early season was unparalleled in thirty years' experience here. It grew about half knee high by the last of September, and blossomed out all over the field within three months of the time of sowing, so as to furnish quite a fall pasture for the bees; and still at this date (the 8th of October) an abundance of fresh feed for my cows and horses. The earliest blossoms bore seed; the later ones the stock fed off.

I am very much pleased with it indeed. I believe it is hardier, more prolific, and furnishes more food for stock than either the red or white clover, and of a far more desirable quality for cows or hogs and especially for horses, as I have not seen the least indication of its causing the horses to "slaver," as both the red and the white clover have done to our horses every year before; so that for some years past we have had to keep them up and out of its way in the fall of the year. If this should continue to be the fact, I should consider it to be invaluable for horses. But if, as some think, "slavering" is caused by a small insect, and not by the seed of clover, it may be the same insect will appear in this also. What is the experience of others on this point? At any rate I shall prepare to sow seed, and sow it largely on all my farms next year, as a grazing and hay crop.

I ought also to add that it was so very dry the middle of May, when it was sown, that some of our best men told me I would certainly lose my seed, and I thought I should myself. But as I needed the feed without delay, I concluded to risk it, hoping it would soon rain. But no rain came, and I still wonder how it could have grown at all or lived, through the weeks of excessive drought and heat that followed. I sowed it without other grain, on ground well harrowed and very fine surface. I run a roller over it, and "draggle-irons" after the roller, which made the ground fine enough on the surface for a carrot bed, as rapidly as a harrow could go over it. This extreme fineness of the soil alone, I think, saved the seed through the drought.

Jacksonville, Ills. J. B. TURNER.

[From Schnekard's "British Bees."]

South American or Stingless Bees.

The foreign genera of bees which will be most interesting to the reader will, I expect, be those of *Trigona* and *Mellipona*, which, in many peculiarities, seem abortive *Apis*. They seem to be nature's first endeavor to construct *Apes*, for they have an apparently imperfect neuration of the wing, in which the external submarginal cell is unfinished. Their only separating distinction from each other, is the difference in their mandibles, which in *Mellipona* are broad and edentate, whereas in *Trigona* they are also broad, but denticulated. In *Apis* these organs are merely irregularly enlarged at the extremity, and hollowed within, rather like a spoon, which structure would of course imply a difference of economy.

A further characteristic of these genera, and which they participate with *Apis*, is the deficiency of spurs to the posterior tibiæ, which separates them from all other genera of bees, as also from *Bombias*, which has two, yet with which, in point of their economy, they more closely assimilate than with *Apis*. They are the South American and Australian indigenous representation of the genus *Apis*, and are found likewise in Java and Sumatra, and in some of the larger and extreme islands of the Indian Archipelago—thus, also, similarly in countries where marsupial animals occur. Like *Apis*, they are social in their habits; but their neuters only are as yet known, neither males nor females having been described. They are reputed to be stingless, and to make honey and wax in enormous quantities. The combs in *Mellipona* are attached either to the branches of trees, or are suspended from them; but how they are enveloped for security is not reported. But sometimes, like *Apis*, they construct them within hollow trees and in the cavities of rocks, as the *Trigona*, in like manner as *Apis* does in its natural state. Their communities are not so large as those of the hive bee, and the cells of their combs are less perfectly hexagonal, the wax being expended upon them in denser quantities; whereas the hive bee is exceedingly parsimonious in the use of this material, a circumstance arising possibly from the different and more difficult mode the latter have of obtaining it. In the latter it is a secretion; but these exotic genera possibly collect their wax ready-made by the exudation of plants, and thus, having more readily obtained it, are more lavish in its use.

Early travellers and historians describe many kinds of honey made by these bees, native to the South American continent, but they report nothing of the peculiarities of the social economy of these insects, nor whether they are so closely allied in this respect to *Apis*, as they are in the collection of honey and wax.

Candy for Bees.

My favorite food is a hard candy, which I make of a cheap article of sugar (*muscavado*), which can be bought for about ten cents per pound. I dissolve this in hot water, and boil it until a little dropped in cold water will go to the bottom, and be hard enough to break readily. I then turn it into tin pans about one-fourth of an inch deep over the bottom, and set them into cold water, that they may cool quickly, and avoid graining like sugar again. When cool, I break it into pieces of a convenient size to feed at once, and put it away to use as wanted. To feed with this, turn the common hives bottom up, and drop it in between the combs on to the bees. The bottom board may be secured with a stone upon it, that it may not be blown off, and the hive remain thus inverted as long as it needs feeding. In movable comb-hives, it may be laid on the frames above the bees. This feed does not stimulate breeding, is easily given to them, and is not expensive. G. W. P. JERRAD,

in Maine Farmer.

Nov 1871

A Bee Story.

General Oliver's experience of bee sagacity is related by the "Boston Traveller": "Many years ago he was an amateur beekeeper, and was a great favorite with those little wise creatures, as with his own kind as well. He kept a hive or two in his own garden in Salem—which, as everybody knows, is full of gardens—and took great delight in communing with his garden friends, being on the most intimate terms with them. One day, after removing a small swarm to a new place in his garden, he went down town to the reading room, and while standing near an open window, was suddenly accosted by a honey bee which seemed to know him and to have something of importance to communicate to him. But it did not occur to him that this visit had any particular significance, and so, after looking over the papers awhile, he went about his business, entering on his way another public room; where, to his surprise, he was followed by the same bee, or another very anxious to gain his attention. At length it occurred to him that this might be one of his own bees, which had been sent to apprise him of trouble in his garden. He accordingly returned immediately home to find his suspicions fully verified. The little new swarm had been attacked by a larger swarm, which was then in the act of robbing the hive of all its treasured honey; and the bees which the general had met down town had been sent off in pursuit of their friend and master, to apprise him of what was going on, and to implore his timely aid. But, alas, their good friend was not quick enough to read their notes of warning and cries for help; and the poor little busy bees were all cleaned out by their stronger neighbors before their general could be got to aid and defend them.

☞We give this story as we find it in print, but must be permitted to doubt whether Gen. Oliver would relate it *just so*.—[Ed.

Salve for Burns.

Equal parts of beeswax and newly churned fresh butter, with a crum of rosin. Simmer slowly till the moisture is out, and strain through a fine cloth. This will keep for any number of years, and is convenient to apply immediately.

Gen. Boynton, correspondent of the Cincinnatti Gazette, writing from San Domingo, gives a glimpse of bee-keeping on that island. Speaking of the ruins of the Convent of St. Francisco, formerly one of the most splendid edifices on the island, he says—"Among the other inhabitants of these ruins, an old woman with half a dozen children, lives in a wretched way under the arches that once were covered with all the magnificence that a wealthy society could command from the endless resources of the Church. Her business is raising bees. The innumerable cloisters, chapels and porches give her abundant places for the hollow logs and rough boxes which serve for hives. * * * * The body of the nave was a banana grove; the sacristy was a stable for horses. In another she smoked the bees out of the hives which were filled."

A Singular Incident.

A few day since, Mr. Gideon Haynes, his wife and little boy, went out to gather some blue grass seed, and a swarm of bees alighted on the boy, literally covering him from head to foot. They hung from his ears, chin and nose, in great bunches, and clung in thick clusters to every part of his body. Mr. Haynes, realizing the dangerous situation in which his child was placed, directed him to stand perfectly still, if possible, and not to move a muscle. This the brave little fellow did, until the bees had all settled. Mr. H. then took a stick, gently lifted the boy's hat from his head, and placed it on a neighboring bush, when the entire swarm left their extraordinary resting place and took to the hat and bush. Strange to relate, the boy received only one sting, and that was caused by his seizing with his teeth, a bee that was trying to make its way into his mouth. If coolness, presence of mind, and unflinching nerve in the presence of danger, entitle one to the honor of a hero, then this little boy should certainly be enrolled in the calendar.—*Morgan County Gazette.*

THE FARMER'S FRIEND.

A new Bee Hive, with Improved Honey Boxes, Patented November 22d, 1870.

☞ Circulars sent free.

GEO. T. WHEELER,

Nov. 1871.—4 mos. Mexico, N. Y.

ITALIAN BEES FOR SALE.

50 hives pure Italian Bees for sale. Ten hives for $1.00, if taken this fall; or twenty-five per cent. higher next spring.

For particulars address,

W. WOLFF,

Nov., 1871.—tf. Jefferson, Wis.

AMERICAN FOREST TREES.

Tulip, Linwood, Ash, Elm, Beech, Maple, Chestnut, Hemlock, &c. Price, $2 per thousand, and upwards. Some varieties by mail, 50 cents per 100. Send stamp for circular. Interests all.

A. BATTLES,

Oct., 1871—2t. Girard, Pa.

W. H. FURMAN,

BREEDER OF ITALIAN BEES.

Having been such for eleven years past, I have over two hundred stocks of pure Italians.

Address me, at

Aug., 1871.—tf. Cedar Rapids, Iowa.

A GREAT CHANCE FOR AGENTS.

Do you want an agency, *local or travelling*, with an opportunity to make *$5* to *$20* a day selling our new 7 strand *White Wire Clothes Lines? They last forever;* sample free, so there is no risk. Address *at once, Hudson River Wire Works*, cor. Water St. and Maiden Lane, N. Y., or 16 Dearborn St., Chicago, Ill.

Sept. 1871, tf.

A. GRAY,
Formerly of Reily, O.

1871.

J. W. WINDER,
Of Cincinnati, O.

IMPORTERS & BREEDERS OF

ITALIAN QUEEN BEES.

We would respectfully announce to our bee-keeping friends of America, that we have our arrangements completed to breed our Queens in Ludlow, Kentucky, opposite Cincinnati, isolated from all impure stock; which is a great advantage to our patrons as well as to ourselves.

Our Queens will be bred from imported stock, from the apiaries of Dr. Blumhoff, Prof. Mona, and Edward Uhle, of the highlands of Italy. All our Queens sent from the apiary are WARRANTED PURE, and satisfaction guaranteed.

Prices to suit the times.

April, 1871.

GET THE LATEST!

GET THE BEST!!

GRAY'S HONEY SLINGER.

(Patent applied for.)

This melextractor is now perfected and offered to the bee-keepers of America for the first time. This machine is made of heavy tin, and well painted or japanned (except the wood work). It is very light, and can be sent by Express, without packing. It was exhibited for the first time at the Cincinnati Convention of Bee-keepers, and was very highly recommended by all the bee-keepers present.

April, 1871.

WAX EXTRACTORS.

We also manufacture this new apparatus for extracting Wax from old and worthless combs, which has now been fully tested. Mr. A. Grimm writes us that he has extracted two hundred and six (206) pounds of the nicest Wax he ever saw, although some of the comb was from ten to twelve years old; and that the bee-keepers of America owe Mr. Gray many thanks for importing and introducing so useful an invention. Every apiarian should have one of these Wax Extractors.

For further information of the above machines, send for descriptive circular, free.

Address,

GRAY & WINDER,
132 West Fourth Street,
Cincinnati, Ohio.

April, 1871.—6ms.

PRICES OF BEES AND QUEENS,

For the Year 1871.

FULL COLONIES of ITALIAN BEES, with tested pure Queens of last summer's raising, in a Langstroth movable comb hive, for 8 frames full of comb, and honey enough to last until May 20th, I will deliver at the Express office at Jefferson station, between the 20th of April and June 1st, for $15 each.

Six Colonies for $14 each.
Ten Colonies for $135.
Twenty Colonies for $250.
Any number above twenty at $12 each.

ITALIAN QUEEN BEES, whose worker progeny has hatched in my apiary, and shows by its marking that they have met with an Italian drone, I will sell at the following prices:

If sent from April 20th to May 5th, $8; May 5th to June 1st, $7; during the month of June, $6; during the months of July, August, and September, for $4. If from ten to twenty queens are ordered, a reduction of 10 per cent. will be made; if above twenty, a reduction of 20 per cent. Untested Queens, whose purity I guarantee, I will sell after June 25th for $2.50 each.

All Queens will be sent by mail post-paid. The box or boxes in which the Queens are sent must be opened in presence of the Postmaster, and a certificate from him must be sent by return mail, if one or more of the Queens should have died during shipment; on receipt of this certificate from the Postmaster, another Queen will be sent, or the money refunded.

YOUNG SWARMS OF ITALIAN BEES, medium sized, with a tested pure Queen of last summer's raising,—sent in a common shipping box, with feed enough to stand the journey,—if shipped before June 25th, will be sent for $9; between June 25th and July 10th, for $8; from July 10th to August 1st, for $7; and after that time for $6.

All claims on account of impurity of Queens or Stocks must be made within 40 days after receipt of Stocks or Queens, or they will not be noticed.

In some cases, where claims are made on account of losses incurred during shipment, I will demand an affidavit setting forth the facts in the case, before I will satisfy the claims.

Safe arrival and purity guaranteed in every shipment. The cash must accompany every order, or it will not be noticed.

ADAM GRIMM.

Jefferson, Wis., April, 1871.